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Mounds of Sacred Earth

Burial Mounds of Ontario

W.A. Kenyon

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W. A. Kenyon was formerly a curator in the Department of New World Archaeology, Royal Ontario Museum.

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Preface

This report has been a long time in the making. I have struggled for many years to achieve some insight into the social processes that led to the building of burial mounds. What are those mysterious heaps of earth that are strewn so sparingly across the breadth of Ontario? And why were they built? I don't feel, at this stage of enquiry, that I have answered either question; but I do feel that I am searching in the right general area, and that my conclusions, however tentative, are basically sound.

I offer no apology for having ignored an important and fascinating range of historical questions. But now that the archaeological field data presented in the following pages are finally available to my professional colleagues, some of them will no doubt employ these data to more traditional ends. I was tempted to this myself—to trace out the relationships between the pottery styles, burial practices, tools, weapons, and ornaments of the mound-builders and similar classes of phenomena among related and neighbouring peoples. This, however, has not been possible; nor, probably, would it have been desirable, for "time's wingèd chariot" moves ever more swiftly and there are many things still to be done.

As with most such projects, this one was materially assisted by a wide range of people, all of whom made significant contributions to its success. These include property owners such as Helen and Lillian LeVesconte of Toronto, Leland and Mary Budreau of Rainy River, Ontario, and George Armstrong of Fort Frances, Ontario, all of whom graciously permitted me to excavate burial mounds on their properties.

ln Rainy River District, the proprietors of the Rainy Lake Hotel, first Carl and Eddie Domanski, then George Walmsley, contributed greatly to the success of the project, as did the regional director and staff of the old Department of Lands and Forests (now the Department of Environment). Other local residents who were particularly helpful were Charles Hill of Devlin, Ontario, Tom and Dorothy Medecine of Emo, Ontario, and Maurice and Edith Desrosier of Rainy River, Ontario.

Betty Lessard of Namakan Lake, Ontario, and Crane Lake, Minnesota, Dennis and Ruth Christianson and Rod Houska of Ranier, Minnesota, and Robert C. Wheeler of the Minnesota Historical Society of St Paul, Minnesota, were others who made valuable contributions.

A long list of high-school and university students served as crew members throughout the project. By convention, most of these must remain anonymous. The following, however, all of whom worked with me on many other projects as well, deserve special mention: Miriam Clavir, Karl Hagan, Ruth Lister, Caroline Parmenter, Burke Penny, and John Prideaux. From time to time, when it was impossible for my wife, Eva, and my daughters, Diane and Christine, to accompany me, they accepted my absence with signal grace. On happier occasions, however, they too could join me in the field, where their assistance, as well as their presence, was deeply appreciated.

But field work is only a small part of any project such as this. Most of the work is done in the laboratory and the office. Endless boxes of specimens have to be unpacked, sorted, washed, and catalogued: friable objects have to be consolidated; artifacts, materials, and bits of food refuse all have to be identified. It is usually only when this work has been competed that the archaeologist can address himself to the final question: what does it all mean? What does this assemblage, distributed across the site in a particular pattern, tell us about the activities of the people who laid down the archaeological deposit that is being analysed? These are complex questions and almost invariably lead to a wide range of professional consultations.

In this area I have been particularly fortunate, and I am deeply indebted to the following colleagues, many of whom assisted me in the field as well: Prof. J.E. Anderson, Department of Anatomy, McMaster University; Prof. C.S. Churcher, Department of Zoology, University of Toronto; Prof. K.C.A. Dawson, Department of Anthropology, Lakehead University; Dr William D. Finlayson, director, Museum of Indian Archaeology, University of Western Ontario; Prof. Richard B. Johnston, Department of Anthropology, Trent University; Dr George Macdonald, director, National Museum of Man, Ottawa: Dr J.H. McAndrews, curator, Department of Botany, the Royal Ontario Museum; Prof. F.J. Melbye, Department of Anthropology, University of Toronto; Prof. Nancy Ossengerg, Department of Anatomy, Queen's University; Prof. Michael Spence, Department of Anthropology, University of Western Ontario; Prof. Bruce Trigger, Department of Anthropology, McGill University; Prof. Rom. Vastokas, Trent University; and Dr J.V. Wright, senior archaeologist, National Museum of Man, Ottawa.

I am particularly indebted to Professor F.J. Melbye and Professor Bruce Trigger, both of whom read earlier drafts of this report. Their judicious comments were extremely helpful, and I am most grateful for their invaluable assistance.

Within the Museum, conservation, as well as cataloguing, was done by Michael Lee and David Gillespie, laboratory technicians in the Department of New World Archaeology. Much of this work was supervised by Peta Daniels, technician, who also assisted me in the field. Studio photographs were taken in the Photography Department by William Robertson and Brian Boyle, and developed and printed by Allan McColl. Field photographs are by the author. Maps, plans, and drawings were done by Kathy Mills, David Gillespie, Rita Granda, Luisa Lupo, and Claus Breede. The endless typing and retyping was cheerfully and expertly done by Joan Williams and Janice O'Connor of the Department of New World Archaeology, and Linda White, secretary, Department of Botany. Finally, the manuscript was edited for publication by John Campsie, head of Publication Services, and the pages were laid out by Virginia Morin, graphic designer, also of Publication Services.

W.A. Kenyon

Introduction

The burial mounds thinly scattered across Ontario and Manitoba seem strangely out of place. If we stand on the north shore of Rice Lake, for example, and look at the ancient serpent resting quietly in its grove of oaks, our minds drift spontaneously to the south; for the Serpent Mound is an alien form—the only one of its kind in Canada—and its nearest relative, almost a quarter of a mile long, sits on a high bluff overlooking a small stream in Adams County, Ohio. Originally, we feel, these serpents must have been conceived in the jungles of Central America or Mexico. As they moved north, their ranks gradually thinned, for the harsh climate of the higher northern latitudes is not suitable for tropical serpents. And so the last surviving member of that strange breed came to rest in Ontario, on the very flank of the Precambrian Shield.

Although the Serpent Mound is the only one of its kind in Ontario, it is not the only mound. In fact, the serpent itself is surrounded by eight other mounds, low oval structures with major diameters ranging from 23 to 48 feet (7.0 to 14.6 m) and heights of no more than 3 feet (0.9 m). Similar mounds, as we shall see, are (or were) scattered across Ontario, but only in the arable portions. They stop abruptly at the southern edge of the Canadian Shield. This means, of course, that they are confined to two regions of the province: the farmlands of southern Ontario and the Rainy River District in the southwestern corner of northern Ontario.

The most spectacular prehistoric native monument in all of Canada is a burial mound on Rainy River (Pl. 1). Overlooking the Long Sault Rapids, it is about 113 feet (34.5 m) in diameter and 24 feet (7.3 m) high. Although it is the most spectacular, it is only one of eleven different mounds dotted along the length of the rapids; and along the north bank of the entire river there are (or were) at least six others between Fort Frances and Lake of the Woods. Here again, as with the Serpent Mound some 650 miles (1046 km) to the east, the associations are obviously with the south. For the Rainy River mounds are also located on the northern fringe of a culture area whose heartland lies farther south; and they too are strewn along the flanks of the Precambrian Shield, which lies just to the north. Before we can hope to understand the building of mounds in Ontario, therefore, we must look to the mound-building cultures of the eastern United States.

It was not till the American colonists had pushed westwards across the Alleghenies that they found mounds to be a significant feature of the landscape, for such features are strangely absent from the eastern seaboard, at least north of Georgia. Once the colonists had crossed into the Mississippi drainage, however, it was a different story, for the Ohio and Mississippi valleys were thickly dotted with mysterious heaps of earth. Many of these heaps were low structures that seemed to blend into the surrounding landscape, but many of them were gigantic. The Cahokia Mound in Illinois, for example, covered 16 acres (6.5 hectares), and soared to a height of 100 feet (30.5 m). Their number was equally impressive. In Ross County, Ohio, there

were five hundred mounds; in the entire Ohio valley there were an estimated ten thousand. And all of the sites were abandoned. That they had been abandoned for some centuries was obvious, because the forest had completely reclaimed the sites—both the mounds themselves and the clearings in which they had been built. The simple horticulturalists who occupied the area when the colonists arrived knew that the mounds were artificial rather than natural formations but had no explanation for their presence.

Various theories were proposed during the 19th century, and even earlier, to account for the mounds that were so thickly scattered throughout the forests of eastern North America. The lost tribes of Israel were resurrected and sent marching through the forest; the lost fleet of Alexander the Great was imagined rowing briskly up the Mississippi and Ohio; even the Druids were transported to the New World—magically, no doubt—to construct their strange places of worship; and the Vikings, too, were proposed as the builders of the mysterious mounds. In retrospect, this is difficult to understand, for the Spanish explorer Hernando de Soto had wandered through Florida and the Gulf states from 1538 to 1543 and had actually visited a number of settlements in which temples, as well as the houses of the ruling classes, were situated on high, artificial mounds. Garcilaso de la Vega, who recorded the de Soto expedition from eyewitness accounts, provides us with excellent descriptions of such structures (e.g., 1951:170–71).

The mythology and speculation that dominated most discussions of the mounds were finally laid to rest in 1879 when John Wesley Powell was appointed director of the newly formed Bureau of American Ethnology. With a rapidly expanding staff led by Cyrus Thomas, Henry W. Henshaw, and William Henry Holmes, Powell initiated a systematic program of mound exploration and published the findings in a series of B.A.E. reports. Argument was long and acrimonious, but it was finally established that the tumuli had not been built by some mysterious race of "mound-builders" but by the ancestors of the native peoples who still occupied the area. The wandering figures of mythology were finally replaced by the Adena and Hopewell peoples in the north and by the Temple Mound peoples in the south.

The present study, then, will chart the distribution of mounds in Ontario, will present the archaeological data that have been made available through a limited and sporadic program of mound exploration, and will draw certain conclusions from these data. This can be accomplished most easily, perhaps, if we start with an explicit statement of the theoretical framework that will be used to classify the archaeological data with which this report is concerned.

The system employed is the one set forth by Gordon R. Willey in *An Introduction to American Archaeology* (1966). Basic to this system is the distinction between chronological *periods* and cultural *traditions*. A tradition is a broad grouping that embraces a number of separate but related *cultures;* a culture is a specific group of people with a distinct way of life. The Iroquois, Adena, and Polar Eskimo, for example, are cultures. But the Iroquois and Adena share certain characteristics which show that they are related, and they are therefore placed in a larger category called the Woodland tradition. In the same way, the Polar Eskimo are grouped with other arctic sea-mammal hunters into the Eskimo tradition. This is the same principle that is used by the

zoologist when he places monkeys, apes, and men in the same order, the Primates. The essential difference between the two systems of classification is that the zoologist traces out genetic relationships, while the archaeologist traces out historical relationships. In eastern North America, Willey lists four such traditions—Big Game Hunting, Archaic, Woodland, and Mississippian.

Chronological periods, on the other hand, are units of time marked off by the dominance of a particular tradition in the area under discussion. Southern Ontario, for example, was dominated by the Big Game Hunting tradition from the time that the glacial ice retreated from the area, approximately 10000 B.C. until about 7000 B.C. This period, the first 3000 years of our history as it is understood at present, is known as the Palaeo-Indian period. It was followed in turn by the Archaic period and the Burial Mound period. Willey's final stage, the Temple Mound period, does not appear in the Ontario sequence, because the Mississippian tradition never spread north into Canada. In tabular form, then, the system as applied to eastern North America is as follows:

Dominant cultural tradition	*Chronological period*
Mississippian	Temple Mound
Woodland	Burial Mound
Archaic	Archaic
Big Game Hunting	Palaeo-Indian

The principle that Willey employed in identifying and labelling his chronological periods is the same as the one the geologist uses in identifying his successive strata, with archaeological cultures serving the prupose of "index fossils".

Although Willey's terminology has been modified from time to time, the concept of cultural tradition has been widely accepted by archaeologists. Here in the northeast, it has largely supplanted the earlier Midwestern Taxonomic System, which was being rejected with increasing frequency even before Willey introduced his system. This is clearly evident if we simply compare the table of contents of William A. Ritchie's 1944 publication on the archaeology of New York State with his 1965 volume on the same topic. The statistical model on which the Midwestern system is based has proved far too rigid and mechanical for dealing with the fluid, ever-changing story of man. Willey's organic model, on the other hand, is sufficiently flexible to delineate the complex growth patterns characteristic of all human cultures, and to do so with considerable precision. It will be necessary, however, to modify Willey's terminology. In keeping with local custom, we will refer to his Burial Mound period as the Woodland period.

The Woodland period begins in Ontario about 500 B.C. with the appearance of pottery in the archaeological record. Although pottery, horticulture, and burial mounds may be functionally related, as has been suggested (e.g., Griffin 1967:180 and Willey 1966:267), they did not arrive in Ontario at the same time. The earliest of the three to arrive on the scene was pottery, which was present in Ontario by 500 B.C. at the Burley and Donaldson sites on the shores of Lake Huron (Jury and Jury 1952, Wilmeth 1978, and Wright and

Anderson 1963), and at the Constance Bay site in the Ottawa Valley (Watson 1972). Burial mounds arrived next, in the early years of the Christian era (Johnston 1968:75). Horticulture was not present in Ontario till A.D. 400 or 500, when corn appeared in the Princess Point culture between Lakes Erie and Ontario (Storck 1977:29). Small quantities of tobacco were apparently being grown by A.D. 1000, but the production of tobacco—and consequently smoking—was not widespread till about A.D. 1350.

The exotic ideas that started to spread into Ontario about 500 B.C. radiated outwards from the Adena and Hopewell centres in Ohio and West Virginia (Dragoo 1963, Willey 1966, and Griffin 1967). These two cultures—the "mound-builders" of popular fancy—had developed a "cult of the dead", a rich and complex set of mortuary practices. This can be illustrated most simply, perhaps, by examining the anatomy of a single burial mound, for example, the Cresap Mound in West Virginia. Fifteen feet (4.6 m) high and 70 feet (21.3 m) in diameter, the mound was excavated in 1958 by Don W. Dragoo of the Carnegie Museum in Pittsburgh, Penn.

Dragoo reported (1963:17 ff.) that the Adena people who built the mound had first removed the humus from a circular area some 40 feet (12.2 m) in diameter. Over this, they had built a structure, possibly a dwelling, with a clay floor several inches thick. Near the centre of the floor was a circular fire pit containing ashes and burned stones. Three shallow graves had then been dug through the clay floor of the structure and into the underlying gravel. Two of these had been lined with clay, and all of them had been lined with bark as well. Each of the graves contained a single extended burial. Following the burials, the graves were not filled in but were simply roofed over with small logs placed crosswise over the pit and then covered with several layers of bark. Finally, each grave was covered with a small mound of earth. A shallow, clay-lined crematory basin had also been dug into the floor of the house, a few feet from the west wall. Burned to a deep brick red by the intense heat of the fire, the basin contained a small deposit of ash and calcined bone and a few scattered flecks of bone and charcoal, apparently all that remained of the cremated body or bodies. Around the edges of the basin were thirteen blades, three blade fragments, two side scrapers, one drill, one stone sphere, two hematite hemispheres, and two small deposits of graphite.

On the southwest quadrant of the floor, the bodies of two adults had been placed in the extended position, each covered by a thin mantle of humus. Other bodies and crematoria had been added from time to time, and the process had been continued till there were at least nine bodies, or parts of bodies, resting beneath a slightly oval mound with a major diameter of some 22 feet (6.7 m) and a height of $4\frac{3}{4}$ feet (1.5 m). Included with the burials was a rich and varied assortment of grave furniture, from which clay vessels were conspicuously absent, as they are throughout the Adena sequence.

The entire process had then been repeated on the south side of the central fireplace. There, a large crematory basin contained one decapitated body and six adult male skulls. In addition to being decapitated, the body had been dismembered. Both of the arms and legs were present, with their bones in the correct anatomical position, but none of them was attached to the torso. The crematory basin, together with a stray skull, had then been covered by a low mound 3 feet 1 inch (0.95 m) high.

A third small mound, which ultimately reached a height of 5 feet $3\frac{1}{2}$ inches (1.6 m), had finally been erected over another subfloor pit directly east of the fireplace in the centre of the house. This mound must have been built in several stages, because it contained eight additional burials scattered throughout the mound fill. Over all three mounds was a thin scattering of charcoal, suggesting that the structure under which they had been built had burned down at this point. Then, during the next stage in the construction of the mound, the "valleys" between the three primary mounds had been filled in with additional crematory basins, burials, and earth. This had resulted in a single mound $6\frac{3}{4}$ feet (2.0 m) high.

The formation of a thin layer of humus on the surface of the mound and the presence of a few shallow erosional gullies tell us that the mound stood abandoned for some time. Then the addition of a few more features and a new mantle of earth raised the mound to a height of 8 feet $2\frac{1}{2}$ inches (2.5 m). This was followed by another period of inactivity during which a second thin layer of humus developed on the surface of the structure. Two more features and a thick cap of earth then raised the mound to a height of $13\frac{1}{4}$ feet (4.0 m), at which point all activity must have ceased for a considerable length of time, because its surface developed a humus layer some 2 to 4 inches (5 to 10 cm) thick.

The Adena people abandoned the Cresap Mound—at least as a burial place for their honoured dead—after one final ceremony, during which eight burials were placed on top of the mound around a fire that blazed with sufficient intensity to burn the earth a bright red. A thick mantle of gravelly soil then raised the mound to its final height. Apart from a single intrusive burial, the mound contained all or parts of 53 skeletons and 787 items of grave furniture. In addition to a wide range of ornaments and ceremonial objects fashioned mainly from shell and copper, the graves contained thirty-five celts, three tubular pipes, ninety-three chipped stone blades, nine drills, thirty-nine scrapers, and seven bone awls. One of the salient features of the burials was the variety of forms that were present.

Fairly early in the Adena sequence, a Hopewell group from Illinois appeared in the Ohio valley. They introduced into the area their distinctive Hopewell Zoned pottery decorated by dentate and rocker stamping, and they continued and elaborated the basic ceremonial themes of the Adena. Specialists are still trying to decide whether Hopewell was a political entity that dominated a vast and complex empire or simply a cult of the dead—a set of beliefs and rituals shared by a number of different Middle Woodland peoples. In any event, the Hopewell influenced an area that spread from the Atlantic to the plains, and from New York State to the Gulf of Mexico; and they remained influential for almost a thousand years—roughly, from 500 B.C. to A.D. 500. Then, for reasons that are still unclear, they began to fade away. But long before that happened, the influence of the Adena-Hopewell amalgam had spread into Ontario. In southern Ontario, the cult of the dead was adopted by at least some of the Point Peninsula peoples; and in the Rainy River District, far to the west, some of the Laurel peoples adopted the same cult. This is not to suggest that either the rituals or the grave furnishings were identical in the two areas. In fact they were quite different, as we shall see. But ultimately they were variations on a single theme.

Mounds in Southern Ontario

The Bay of Quinte Mounds

In September 1860 Thomas Wallbridge published an article, "On Some Ancient Mounds upon the Shores of the Bay of Quinte," in the *Canadian Journal*. This is probably the earliest archaeological report in Ontario and must be among the earliest in all of Canada. There had been earlier references to archaeological sites and specimens,[1] to be sure, but no reports on actual archaeological excavations.

Wallbridge (p. 411) described the Bay of Quinte mounds as follows:

> Commencing at Rednerville, in the Township of Ameliasburg, they can be traced along the Bay shore to the Plains of Massassaga Point, a distance of about eight miles. In this space, including the islands in the so-called "Big Bay", upon which they also occur, perhaps one hundred distinct mounds can be counted.

Wallbridge described the mounds as truncated cones 30 to 50 feet (9.2 to

[1]E.g., W.E. Guest (1857)

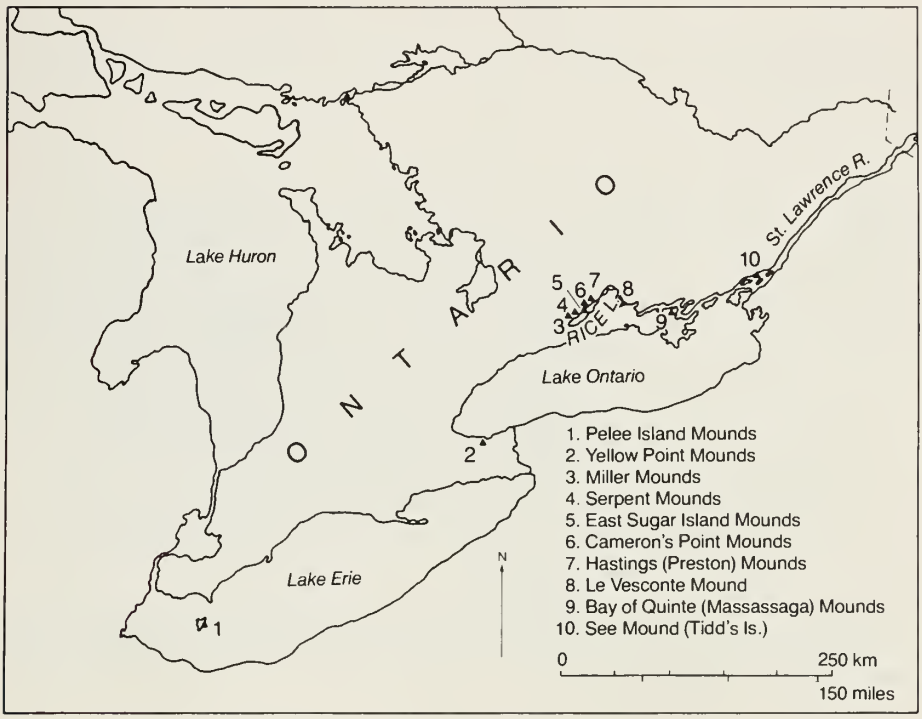

Fig. 1 Distribution of burial mounds in southern Ontario

15.2 m) in diameter at the base and never more than 5 feet (1.5 m) in height. Each mound, he said, had

> a shallow basin or circular depression upon its summit, which, whatever the size of the work, has a diameter of eight feet. It is a remarkable peculiarity of these works that in almost every instance they occur in groups of two and at irregular distances the one group from the other. Irregularity is likewise observable between any one mound and its fellow, these being sometimes found in juxtaposition, and again from fifty to one hundred feet asunder.

Wallbridge noted, also, that "the two of the same group are always of one size".

Wallbridge had opened five of the mounds[1] the previous year and had found that they were built of small, angular blocks of broken gneiss (Fig. 2). Apart from a few fragments of human bone and a few bits of birchbark found

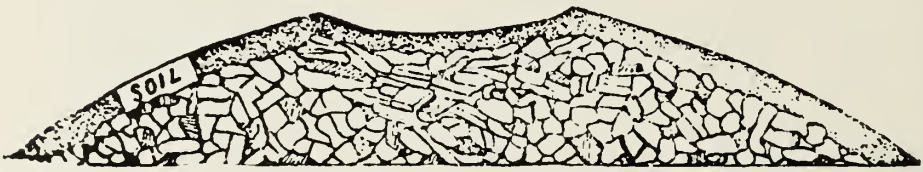

Fig. 2 Section through Massassaga Mound, redrawn from Wallbridge (1860: 418)

on top of the mound, just below the humus, neither burials nor grave furniture were encountered. Later in the summer Wallbridge returned to Massassaga Point with Henry Cawthra of Toronto and opened "several" more mounds with the same results. The mounds were strangely empty. Finally, however, they opened a mound that contained both skeletal material and grave furniture. Near the centre of the mound, at its base, was found a complete skeleton accompanied by what Wallbridge called "the contents of a magician's or conjurer's bag". This cluster of grave goods contained one bone comb ornamented with an inscribed geometric design; six bone splinters, of which at least one was polished; one unilaterally barbed bone point; two waterworn pieces of limestone "somewhat resembling the Indian foot covered with a moccasin"; also

> three large beads fashioned from the columella of a conch shell; a number of fossils commonly found in the local limestone formation; several queerly shaped waterworn stones; several freshwater shells; a few small lumps of ochre; the breastbone of an eagle; a bear canine and a beaver incisor; a pair of horn-cores resembling those of a ram.

Wallbridge noted, "There were perhaps a dozen bodies originally deposited in this work." Four of them, at least, had been buried in a sitting position, with their arms comfortably folded.

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[1]On Massassaga Point, Ameliasburg Township, Prince Edward County

Commenting on the broader picture, Wallbridge suggested that the mounds in Ontario—or Upper Canada, as it was called at the time—were built "at various periods, under different circumstances, and perhaps by different people". He did not know who might have built the Bay of Quinte mounds, but he did know that they were built by some group that inhabited the area prior to the arrival of the Massassaga, for he noted: "They allowed the mounds upon their favorite camping ground to be ransacked with impunity. Neither have the survivors of that tribe, who moved in 1830 to Alnwick, near Rice Lake, any known tradition that will assist this enquiry."

The empty, ring-shaped mounds that Wallbridge described and illustrated left him perplexed. He seemed positively relieved, in fact, when he finally located one that yielded human remains; and from that single instance he concluded that the Bay of Quinte mounds were burial mounds. A more reasonable conclusion, and the one that I prefer, is that they were *not* burial mounds and that the burial that Wallbridge and Cawthra finally managed to locate was intrusive.

A group of similar mounds (Fig. 3) scattered along the shores of Perch Lake in upstate New York was examined by William M. Beauchamp (1905) and William A. Ritchie (1969). Neither of them was able to explain the presence of those anomalous ring-shaped structures. Our only achievement so far has been to translate our ignorance into Latin: we now refer to them as "annular" mounds.

The See Mound

The next mound excavation that appears in the archaeological literature is described in David Boyle's report on the See Mound[1] (Boyle 1888). This

[1]Located on Tidd's Island, Leeds County, front of Leeds and Lansdowne Townships

Fig. 3 A Perch Lake mound, reproduced from Beauchamp (1905: pl. 9)

structure was located on the property of C. A. See at the western end of Tidd's Island, approximately "midway between the northern and southern shores and about three hundred feet from the western point". It was circular in outline and 4 to 5 feet (1.2 to 1.5 m) high. See had been removing the mound fill to use as building material when he encountered human bones. By the time Boyle arrived at the site, most of the mound had been removed, together with all of the burials.

Boyle excavated the few remaining portions of the mound, and then combined his own findings with those of See to produce the following picture. Unlike the mounds at Massassaga Point, this one was built of humus scraped from the surface of the surrounding area. In the centre of the mound, and apparently on the original ground surface, was a large deposit of ashes, presumably the remains of a bonfire. Radiating outwards from the ash deposit were twelve or fifteen bodies with their feet towards the fire and their heads towards the outer edge of the mound. "Placed over the bones, and especially about the head, were several large, flat stones ...". Also associated with the crania was a rich assortment of grave furniture, which has been described in detail by Michael W. Spence (1967).

In the summer of 1896 Boyle investigated five different mound sites in the Peterborough area. He published the results of his work the following year (Boyle 1897 : 19–37).

The Serpent Mounds

Lot 7, Con. 7, Otonabee Twp., Peterborough Co.

When Boyle first visited the Serpent Mound site, as it is designated today, he was investigating reports of a large earthwork "situated on Mazang's Point, near the mouth of the Indian River, on the north shore of Rice Lake, about ten miles southeast of Peterboro'". The local people, both Indian and European, believed that the earthwork had been raised as a defence against the marauding Iroquois from New York State. Boyle found that the embankment or earthwork was a sinuous structure 189 feet (57.6 m) long. In addition to the earthwork, however, he noted the presence of five oval mounds that the local people had apparently not mentioned. The major axes of these five mounds, all parallel, ran east and west, as did the centre line of the long, sinuous embankment itself (Fig. 4). Their orientation, that is to say, was not random.

Obviously intrigued with what he had found, Boyle set to work immediately. He had his crew cut a T-shaped trench into one of the smaller mounds to see whether it was a man-made structure or merely a natural formation. As soon as he was able to examine the internal structure of the mound, he saw that it was artificial. But even while his men were cutting their test trenches into the mound, Boyle's attention was riveted on the sinuous earthwork, as the following comments make clear.

> At frequent intervals during the excavation of the oval mound, I travelled backwards, forwards, and around the long zig-zag embankment, now that I began to feel certain as to its origin, puzzled to account for its configuration, and its relation, if any, to

Fig. 4 Map of the Serpent Mound site, reproduced from Boyle (1897: 20)

> the more easterly structure on which we were at work. On one of those occasions, when standing on top of the ridge some fifty feet from the westerly extremity, it struck me as being strange that this end of the bank should taper so gradually that its terminating point could not be distinguished accurately within a foot or more. This suggested the idea of a mere beginning, or a failure on the part of the builders to complete their work, and the next thought was to examine the other end. Here, however, there was a very marked dissimilarity, for the bank rose at a sharp angle to a height of four feet and was much more expanded than any other portion of the mound. In the course of another walk along the earthwork I was struck with the thought that this was a serpent mound, but the idea seemed absurd to one who, on account of frequent disappointments, is prone to cast doubt on fanciful resemblances of every kind. Still, there was the broad, abrupt head—there was the tapering tail, and between these were three well-marked convolutions—the zig-zags hitherto without meaning.

Boyle cut two trenches into the Serpent Mound, one into the "head", the other about 70 feet (21.3 m) from the west or "tail" end. He found some decayed bone and some "comparatively recent burials", all within 2 feet (0.6 m) of the surface. No grave furnishings were reported.

Boyle subsequently identified the first mound that he opened as an "egg" in association with the serpent. Here, he was admittedly influenced by a similar association at the well-known serpent mound site in Adams County, Ohio. His first trench through the egg mound, 10 feet (3 m) east of the north-south axis, uncovered "two human skeletons in a sitting position", as well as a stray skull and some arm and leg bones. All this material was within 2 feet (0.6 m) of the surface. His second trench, at right angles to the first, followed the east-west axis of the mound from the western end to the first trench. Although Boyle does not give precise locations for the material that he uncovered in the trench, he does provide us with relative positions. Near the western end of the trench, and at various levels, he unearthed a human skull, some dog or wolf teeth, and some small fragments of mussel shells and charcoal. Beneath this material, at the base of the mound, he found a human skeleton lying on its right side.

Farther east, within 7 feet (2.1 m) of the mound centre, was a deposit of burned human bones. The absence of either ash or charcoal, however,

indicated that the body had been cremated elsewhere. A few inches below the cremation were "two or three small fragments of pottery", the only cultural material that Boyle collected at the site. Still farther east was a lens of black earth mingled with ashes and mussel shells; and below this, at the base of the mound, was a crude circle of stones about 3 feet (0.9 m) in diameter. Many of the stones, but not all of them, had been subjected to intense heat, although there was no evidence of fire in the area.

Boyle concluded that the skeletal material he recovered from his first trench through the egg mound, at a depth of no more than 2 feet (0.6 m), was derived from intrusive and comparatively recent burials; the material from his second trench, on the other hand, was mainly at or near the base of the mound and had been placed there before or during its construction.

Although Boyle also tested the other four mounds he observed at the site, his examination of them was relatively superficial. He found what he identified as intrusive burials in each of them, always within 18 inches (45.7 cm) of the surface. Beyond that, he mentions only the skeletons of an adult and a child and two other skulls.

The Miller Mounds

Lot 4, Con. 11, Otonabee Twp., Peterborough Co.

On the Miller farm, at the mouth of the Otonabee River, there were originally seven mounds, according to reports that Boyle received from some local residents. Two of the mounds were "near the top of a gentle slope facing southwards", some 80 to 100 feet (24.4 to 30.5 m) above Rice Lake. The other five were in a low-lying field to the southwest. When Boyle visited the site, only two of the mounds remained, one at the top of the slope, the other in the low-lying field. One of the upper mounds had been destroyed when a former tenant dug out the centre of the structure to build a root-cellar. During the process he unearthed two or three human skeletons. Three of the mounds in the lower field had also been destroyed, having been levelled by repeated ploughing.

The remaining mound at the top of the slope was an oval structure with an east-west diameter of 35 feet (10.7 m) and a north-south diameter of 19½ feet (5.9 m). It was 3 feet (0.9 m) high. During the excavation of this structure, Boyle unearthed three isolated skeletons, as well as "two small celts, two tools made of deer-horn points and a very well-made bone arrow or knife ..." The artifacts were probably grave furniture, although Boyle failed to mention any such association. "The construction of this mound", Boyle tells us, "was extremely rude, the materials—clay and small and large stones—having apparently been thrown together regardless of order, and some of the largest stones, weighing from fifty to sixty pounds, were in immediate contact with the bones."

The remaining mound, the one in the low-lying field, was circular, 74 feet (22.6 m) in diameter, and about 2½ feet (0.8 m) high. It was reported to have been about 6 feet (1.8 m) high, with a correspondingly smaller diameter, before the soil was dispersed by cultivation. Boyle excavated the mound by

cutting a north-south and an east-west trench through the structure. These were both 3 feet (0.9 m) wide and intersected at the centre of the mound. He then excavated the quadrants. In the north-south trench, some 15 to 20 feet (4.6 to 6.1 m) north of the centre and near the base of the mound, Boyle found a single human skeleton, the only one in the entire structure. In its thoracic region was a large shell gorget in the form of a turtle (Pl. 2). Two small, roughly made celts were found near the same spot and in all probability were also associated with the burial. "Two days' subsequent digging", Boyle tells us, "yielded nothing but three bone harpoons." Apart from the burial and the specimens, he found only one significant feature in the mound, a shallow depression in the subsoil that contained evidence of fire.

Boyle was perplexed by the fact that the shallow pit in which a fire had burned so long ago was located at the very centre of the mound, while the only burial that was found was about half-way between the centre of the mound and its northern edge. "It did not seem probable", he pointed out, "that so large a heap was raised merely to cover a single body, or to commemorate its burial." He was struggling here with the same problem that had beset Wallbridge almost forty years earlier: the structures that are usually referred to as "burial mounds" should have contained the bodies of some important person or persons; and such remains should have been deposited at or near the centre of the structure which would be raised to cover them, and to mark their final resting place. But such was not the case.

The Cameron's Point Mounds

Lot A, Con. 1, Asphodel Twp., Peterborough Co.

Boyle found three mounds on Cameron's Point, a high bluff near the eastern end of Rice Lake. Like the other mounds on the shores of the lake, these, too, were on the north side and in a commanding position. "The appearance of these mounds", Boyle tells us, "was not at all inviting, on account of the large stones that marked their surfaces, and seemed to indicate their general construction." Although Boyle did not mention it specifically, the mounds were all long, flattened ovals with their major axes parallel to the shore. W. G. Long, who actually excavated the mounds for Boyle when he was called away on another project, labelled them, from west to east, A, B, and C.

Mound A was 70 feet (21.3 m) long, 18 feet (5.5 m) wide, and 4 feet (1.2 m) high. When Long excavated this feature, he unearthed five skeletons, four of which he considered intrusive. The basis of his conclusion was not stated, but seems to have been the depth at which they were buried. Like Boyle, Long apparently believed that the person or persons for whom the mound had been raised would have been buried at the base of the structure, and at its centre. The fifth skeleton, the one which he identified as "the mound-builder", was that of a flexed burial on its right side. It had been placed on a bed of sand and surrounded by a circle of stones. "Slight traces of fire were seen on some of the stones, but none whatever on the bones." With the possible exception of a single piece of wood, the mound contained no artifacts.

Mound B, 20 feet(6.1 m) east of Mound A, was 66 feet (20.1 m) long, 20 feet

(6.1 m) wide, and 4½ feet (1.4 m) high. Three trenches were cut through this feature, one along the major axis and two at right angles to it. "Here, as in A, the soil was mixed and consisted of clay and gravel, but contained a greater quantity of stone." At a depth of 2 feet (0.6 m), rows of stones were encountered. From Boyle's report, however, it is impossible to trace out these rows in any detail. At the crest of the mound, near its eastern end, ten intrusive burials were encountered; these had been covered by stones of such weight that nine of the ten skulls were either crushed or distorted. At the base of the mound, a large concentration of boulders was found, and beneath the boulders were two badly decayed skeletons. The only artifacts recovered from this structure were "a small polished, unperforated tablet, and a lump of wood".

Mound C, 92 feet (28 m) east of Mound B, was 75 feet (22.9 m) long, 20 feet (6.1 m) wide, and 3½ feet (1.1 m) high. The stone concentrations that were a salient feature of all three of the mounds on Cameron's Point were particularly evident here. Long, the excavator, mentioned that he did not have sufficient time for a more thorough investigation of this feature, and because of "the great quantity of stone piled on the western half of this mound, it was impossible to cut through its entire length". As in mound B, a layer of stones was encountered at a depth of 2 feet (0.6 m), but again, the precise arrangement could not be determined from Long's rather vague description. Below the concentration of stones and very close to the eastern end of the structure was a crematorium, a 3-foot (0.9 m) circle of stones containing a single charred skeleton on a deposit of ashes and charcoal that was 3 inches (7.6 cm) thick.

"This mound produced three skeletons, two of which were intrusive, and were twelve and eighteen inches below the surface. No relics were obtained."

The East Sugar Island Mounds

Otonabee Twp., Peterborough Co.

With the continued assistance of Long, Boyle next turned his attention to East Sugar Island, "a mile or so east of Mazang's Point, and near the mouth of the Indian River". There, on a gentle, south-facing slope, he excavated two mounds that are usually referred to as the "Prince Mound" and the "Princess Mound".

The latter was almost perfectly circular, 38 feet (11.6 m) in diameter and a shade over 4½ feet (1.4 m) high. In sharp contrast with the mounds on the north shore of the lake, the Princess Mound was almost free of stones, except within a foot (0.3 m) of the surface, where they were somewhat more plentiful. Boyle found five intrusive burials towards the northeast edge of the mound, and towards the southern edge he found two more that had a few stones scattered over them. Neither cluster had been provided with grave furniture.

At the base of the mound, and quite close to its centre, Boyle found the skeleton of a woman who had been buried in a sitting position with her legs tucked up till her feet were within 10 or 12 inches (25.4 or 30.5 cm) of her hips. She was facing east, with her hands on her breast about 8 inches (20.3 cm)

below her chin. Around her neck were eight strings of beads: three strings of copper beads (Pl. 3); two strings of small saltwater shells, *Marginella conoidales* (Pl. 4), and three strings of discoidal shell beads (Pl. 5). The total number of beads was 1515—350 of copper, 300 *Marginella*, and 865 discoidals. "Outside of the right arm and within three inches of the breast were a very perfect stone tablet (Pl. 6), and a little beyond it, a copper axe, or heavy chisel, sharpened at both ends" (Pl. 7). And at the base of her skull was a small deposit of powdered haematite in what was probably a bark container.

The Prince Mound, Boyle tells us, "was on the hillside, and so flat on the top that it presented no face towards the north, and resembled an almost circular step thirty-one feet long and three feet ten inches high, with its convex side to the south". On opening the mound, Boyle found two intrusive burials and a broken gorget. Then, near the eastern edge of the mound, he located a primary burial, another female in a half-sitting position. She was leaning over to the right and facing southwest, with a bracelet of copper beads on each wrist. Boyle noted that the body "was resting in, rather than on, a bed of stiff clay and sand, evidently prepared for its reception ...".

The Hastings Mounds

Lot 6, Con. 9, Asphodel Twp., Peterborough Co.

Located about a mile downstream from the town of Hastings, and on the north side of the Trent River, this cluster of three mounds is also known as the Preston mounds because the property on which they stood was owned by John Preston at the time of Boyle's visit. The mounds were strung out in a line at the top of a steep slope that dropped off into the river. The largest structure was a linear mound 80 feet (24.4 m) long, 22 feet (6.7 m) wide, and $3\frac{1}{2}$ feet (1.1 m) high. Its major axis was parallel to the river, which runs east and west at that point. Sixty-five feet (19.8 m) west of the linear mound was an oval mound with a major axis of 19 feet (5.8 m), a minor axis of 15 feet (4.6 m), and a maximum height of 2 feet (0.6 m). Its major axis, like that of the linear mound, was parallel to the river. The remaining mound was the smallest of the three, but Boyle failed to report its dimensions. He tells us only that it was located 80 feet (24.4 m) east of the linear mound.

Boyle started his investigation by cutting a trench across the linear mound near its centre. Although the cut showed quite clearly that the mound was a man-made structure, neither burials nor artifacts were encountered. He then dug a trench along the major axis of the mound, starting at the west end. Early in the excavation, he exposed a bed of charcoal at a depth of 12 inches (30 cm), then another at 18 inches (45.7 cm). Eight feet (2.4 m) into the mound and at a depth of 2 feet (0.6 m), he found "a human skeleton lying on its right side with the head eastward, and below this, at intervals of a few inches to the base of the mound were traces of fire". As he continued trenching eastwards,

> numerous skeletons appeared in various positions, and all within two feet of the surface. Near the eastern end, and three feet below the crown of the mound, the earth was burnt over an area of about

> fifty square feet, and six or eight inches below this lay another skeleton, the skull of which has been preserved. Most of the other bones were decayed. No relics of any kind were found beside any of the remains, all of which, indeed, except the last mentioned, being (*sic*) apparently connected with intrusive burials.

In the centre of the western mound, Boyle encountered a lens of burned earth and charcoal at a depth of 10 inches (25.4 cm); and 8 inches (20.3 cm) below that he exposed some "charred human leg and rib bones, in a bed of ashes". Below the crematorium, in turn, was a layer of extremely hard clay from 4 to 6 inches (10 to 15 cm) thick, which apparently covered the entire structure at that level. When the clay was removed, the bodies of seventeen people were exposed. "Some of them", he tells us, "were underlying others to a depth of four feet, or two feet below the outside level. There was no apparent arrangement in the placing of these, and the earth-heap seemed to be a combination of mound and ossuary."

In the eastern mound, "there were a few traces of human bones, all within a foot or a foot and a half of the surface. No grave furniture was found in any of the three mounds."

The Pelee Island Mounds

Lots 34, 36, and 39, Pelee Twp., Essex Co.

David Boyle investigated his next mound site in the summer of 1899, when he visited Pelee Island in Lake Erie (Boyle 1900). This quadrangular island is the southernmost spot in Canada. On the southeast corner of the island, near Mill Point, Boyle found three mounds, one on each of lots 34, 36, and 39 (Fig. 5). Their precise locations were not recorded, but they were all apparently within 300 feet (91.5 m) of the shore and were all on relatively flat, low-lying ground (Fig. 6).

The mound on lot 34 was described as a broad, flat oval, with a north-south diameter of 50 feet (15.2 m) and an east-west diameter of 40 feet (12.2 m). It was 3 feet (0.9 m) high.

> Near the north end were found small quantities of charcoal and Indian corn, but with these exceptions there was nothing beyond the nature of the soil to show that human agency had been employed in constructing this mound. The conclusion arrived at was that the greater part of the elevation to the south was a natural formation, and that additions had been made at the north end, but for what purpose beyond that of symmetry is hard to say.

The mound on lot 36 was another low, oval structure 3 feet 4 inches (1.0 m) high, with a north-south diameter of 43 feet (13.1 m) and an east-west diameter of 37 feet (11.3 m). In contrast with the other mounds at the site, this one was built of slabs and angular masses of limestone weighing from "a few pounds to forty or fifty in weight". These, Boyle pointed out, were not placed in any particular order, but were simply heaped up. The only exception occurred

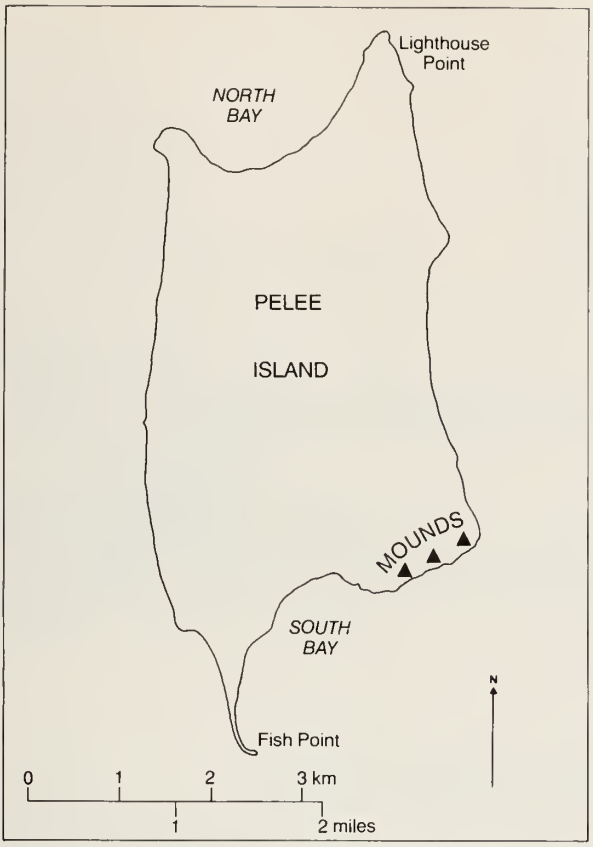

Fig. 5 Map of Pelee Island

near the centre of the mound, where thin slabs of limestone from 2 to 3 inches (5.0 to 7.6 cm) thick had been placed over a burial. The body was that of an adult lying on its left side. "Across the feet of this skeleton was another lying east and west. The skull was missing, as were all the bones of the right side from shoulder to pelvis, but the large bones of the left arm and of both legs were perfect." In the same area was the skeleton of a child, as well as some scattered skeletal elements. No grave furniture was found in association with any of these remains. A few "flints", two celts, an unfinished gorget, a bone awl, and "a few other things" were scattered throughout the mound fill, but none of these items, apparently, was within 10 feet (3.0 m) of the skeletons.

The mound on lot 39 had an east-west diameter of 45 feet (13.7 m), a north-south diameter of 40 feet (12.2 m), and a height of no more than 3 feet (0.9 m). It was built of humus which had been scraped from an area at least 150 feet (45.7 m) in diameter. Near the centre of the mound were a few small pieces of human bone, all that remained of a burial that had apparently been looted at some earlier date. In the same general area, Boyle also found a large pocket of charred corn and beans; and mixed with this material, he tells us, were four small copper beads like those that were found on East Sugar Island. Scattered throughout the mound fill were "a piece of coarse red jasper-like material having two conchoidal fractures", two bits of chert, a leaf-shaped flint, and two fragments of pottery.

Fig. 6 A Pelee Island mound, reproduced from Boyle (1900 : 31)

The Yellow Point Mound

Lot 18, Con. 1, Louth Twp., Lincoln Co.

On 18 August 1901, Boyle started work on a mound near St Catharines, apparently the last such structure he excavated (Boyle 1901:25–29). He described the site of the mound as follows:

> Just before the Twenty Mile Creek enters Lake Ontario,...it expands into a pond, covering several hundred acres, surrounded by steep, high shores, especially on the right, or east, bank, where the elevation may, in some places, be as much as sixty feet. On both sides the land through which the stream has cut its way is comparatively level...The east side of the pond is somewhat irregular in outline towards the southern end, and on the top of each of the three principal bluffs is a low mound.

Boyle excavated the most northerly of these mounds, on what was known locally as Yellow Point (Fig. 7.)

The mound was an oval structure with its major axis lying north and south; it was 38 feet (11.6 m) long, 27 feet (8.2 m) wide, and 3½ feet (1.1 m) high and was built of yellow sandy loam. In the southwest quadrant of the mound were a small deposit of mica fragments and a small deposit of mussel shells. Neither of these was associated with a burial. Two skeletons were also found in the same quadrant, however, one accompanied by a sandstone net-sinker, the other without grave furniture. The northwest quadrant contained neither skeletal remains nor artifacts.

Fig. 7 A Yellow Point mound, reproduced from Boyle (1901 : 25)

Two feet (0.6 m) east of the centre of the mound was a skeleton with tightly flexed arms and lower legs; associated grave furniture consisted of two crude projectile points, one slate knife or chisel, and one slate gorget. All of these, apparently, were found in the chest area. Farther east was a fully extended skeleton; and still farther east was a cluster of disturbed bones. Both of the latter burials were without grave furniture.

In the centre of the southeast quadrant was a burned area 11 feet (3.4 m) in diameter. At the centre of this area were a charcoal deposit and a charred stake 14 inches (35.6 cm) long and 3 inches (7.6 cm) thick, still standing where it had been driven into the ground before the mound was built.

> Around the stake were portions of human bones—skull, arm, leg, and rib—all thoroughly burnt. Near the stake we found a small and roughly made stone axe...The evidence was almost undoubted that here a living human being had been burned. As the charred wood and bones were on the same level as that on which the bodies were buried, the inference is that the burials and the burning took place simultaneously.

Following Boyle's excavation at Yellow Point, no work was done on the mounds of southern Ontario till Henry Montgomery visited the Serpent Mound site in the fall of 1909. Montgomery (1910) cut four trenches into the mound, one near the head, the other three at the highest and widest part of the structure. His test trenches were each 10 feet (3.0 m) wide and between 10 and 14 feet (3.0 and 4.3 m) long.

In the trench that he dug near the head of the serpent, that is, in its eastern end, Montgomery found a pavement of boulders under 2½ feet (0.76 m) of fill.

Below the rocks was a layer of earth, only a few inches thick, covering seventeen human skeletons. These, he tells us,

> were irregularly deposited in different directions and mostly in an extended or nearly extended position. They covered an area about seven by ten feet in size, and they lay upon a stratum of burnt earth about three inches in thickness and containing fragments of burnt or charred bones.

The prepared platform, in turn, was not resting on the original ground surface, but slightly above it. "A rudely formed bone article somewhat like an awl was found with the skeletons." No other grave furniture was noted.

In one of the three test-pits that he dug in the highest part of the mound, Montgomery found three separate deposits of broken human bones. These, he said, were the remnants of four different skeletons that had been removed by some previous excavator. The only artifacts encountered in this pit were a few fragments of broken pottery.

In another test-pit in the same area, and just east of the trench that Boyle had dug through the body of the structure, Montgomery found a pile of rocks about 2½ feet (0.76 m) high and some 7 feet (2.1 m) in diameter. "Beneath these stones were found only a few broken bones and one small fragment of pottery." In addition to the human bones, a number of broken deer bones were found, as well as a fragment from a beaver incisor. At least a dozen *Unio* shells were also found, most of them complete; and at a depth of 4 feet (1.2 m), small pieces of charcoal were encountered.

In his fourth test-pit, Montgomery encountered a horizontal layer of heavy boulders at a depth of something over 2 feet (0.6 m). Beneath the boulders were ten human skeletons, a few fragments of burned bone, a small piece of pottery, a shell pendant, and 353 shell beads. Montgomery identified five of the shells as *Oliva literata* and twenty-eight as *Marginella apicina*. The remaining 320 were discoidal beads which he suggests were probably fashioned from the large gastropod *Fulgar perversa*.

Cameron's Point Revisited

Following the work of Montgomery, the mounds of southern Ontario lay fallow for over forty years. Finally, however, in 1952, J. Russell Harper, who was then with the Royal Ontario Museum, returned to the Cameron's Point site that Boyle had tested in 1896. Harper found that in the interim Mound A had been partially eroded, and Mound B had almost completely disappeared. He confined himself, therefore, largely to a detailed examination of the surviving mound, C, and to a few test-squares in other parts of the site. Harper found the mound essentially as Boyle had described it, although Harper's measurements make it slightly smaller—72½ feet (21.1 m) long, 17½ feet (5.3 m) wide, and 2½ feet (0.8 m) high. He excavated 700 square feet (65.2 m^2) of the mound to subsoil.

Before they constructed the mound, the builders had removed the sod from most of the site. "Only one small area, 10 square feet at the eastern end of the site, was not cleared" (Spence and Harper 1968:9). Next, a shallow, irregular

trench measuring approximately 1.5 m × 3.0 m was dug to a depth of some 18 centimetres near the eastern end of the mound site. Two small deposits of golden brown, sandy soil were then placed on the cleared area, one towards each end. Next, a fire was built on each deposit of this primary fill. And finally, the mound itself was built of the same sandy soil that had been used for the primary deposits. It was only the two lenses of charcoal, in fact, that enabled Spence and Harper to separate the two deposits of fill. The purpose of the fires, like that of the shallow trench mentioned earlier, could not be determined. Apart from the brief interlude represented by the remains of the fires, the mound was evidently built as a single unit.

At least fifty skeletons or parts of skeletons were unearthed during the excavations of Mound C (Spence and Harper 1968:67). Ten of them were found in shallow, submound pits; the remaining forty were either on the floor of the mound or scattered throughout the mound fill. The burial pattern was extremely complicated in that it included both primary and secondary burials, as well as cremations. It also included "re-articulations", in which skeletal elements from dismembered bodies had been placed in or near their correct anatomical positions when they were buried.

The distribution of the different types throughout the site is of primary significance in that it provides us with some vivid sociological insights. Spence and Harper found, for example, that of the fifty burials (or parts of burials) that were recovered, only three were primary burials, and these were all found in submound pits. They found, too, that items of grave furniture also tended to cluster at the base of the mound, as did re-articulated skeletons. As Spence and Harper pointed out (1968:14), "Burials which were articulated and with grave goods occurred at the mound floor, while those throughout the secondary fill were disarticulated and lacked grave goods." Spence and Harper suggest that these differences reflect differences in status, with the bodies of individuals of high status at or below the floor of the mound, and those of lesser status in the mound fill.

The only item of grave furniture retrieved from the mound fill was an unmodified piece of fossilized horn coral. This was found with burial 36c, a few scattered and partially cremated remains of an adult skeleton.

An elaborate assemblage of grave furnishings from the site was found with the skeleton of a seven-year-old child, burial 24, at the base of the mound. It had been placed on the original ground surface just before the mound was built.

> There were two strings of beads around the neck, one of alternating copper and silver beads and one of shell disc beads. A shell pendant, attached to the shell disc bead necklace, was lying in front of the child's mouth. Resting on the pendant were a silver panpipe band and five more shell beads. (Spence and Harper 1968:22)

The remaining grave furniture was all derived from submound pits. Burial 9 contained the re-articulated skeleton of a six- or seven-year-old child, with its head resting on a platform pipe. A dark stain in the same area suggested that a lump of iron pyrites had also been buried with the child but had long since disintegrated.

Burial 25 contained the skeleton of an infant between four and twelve months old. Although the bones were all present, they were not articulated but simply scattered across the bottom of the grave. Among them were one chipmunk mandible and the right half of another. No other grave goods were present.

Burial 35, a three- to five-year-old child, was again complete but disarticulated:

> Fifty-eight shell disc beads were present, some retaining a linear pattern indicating that they had once been strung. Also present among the child's bones were eleven beads of bird bone, part of a pottery bead, a ground fossil horn coral, two complete mink mandibles, the left half of a weasel mandible, and a stone pottery decorator. (Spence and Harper 1968:24)

Burial 37 contained the articulated skeleton of a male some twenty-seven to thirty years old. It was lying on its back and heading west. In the pelvic area were seven claws of either a timber wolf or a large dog. The remaining grave furniture was associated with the skull. This consisted of two lumps of iron pyrites, both the proximal and distal ends of the left femur of a black bear, an antler tine, two irregular pieces of quartz, a handle fashioned from the base of an antler, three large awls fashioned from elk bone and antler, an antler knife, nine bone splinters that were probably barbs from composite fish-hooks, an unmodified beaver incisor, and a bone pendant.

From these data Spence and Harper conclude (1968:30), "Articulation, grave goods, and submound burial were honours reserved for those of high status."

The Serpent Mound Revisited

Three years after Harper's work on Cameron's Point, the Royal Ontario Museum started a six-year research project at the Serpent Mound site. During the first two years of excavation, the field director was William Adams. In 1956, the second season of excavation, Richard B. Johnston joined the project as assistant field director; he continued as field director for the following four seasons. His final report on the project was published in 1968.

Adams and Johnston investigated four of the eight mounds that were scattered across the site. (Boyle, incidentally, had identified only six of the mounds, overlooking the two lowest structures.) One of these, of course, was the famous serpent; the other three were circular or oval mounds. The serpent was about 194 feet (59.1 m) long and had an average width of 25 feet (7.6 m) and a maximum height of 5 to 6 feet (1.5 to 1.8 m). The other mounds at the site had major diameters ranging from 23 to 48 feet (7.0 to 14.6 m) and heights ranging from 1 foot 2 inches to $4\frac{1}{2}$ feet (0.4 to 1.6 m).

One of the oval mounds, Mound H, had been virtually "gutted" before even Boyle appeared on the scene. By the time Adams cut an exploratory trench through the structure in 1955, all that he found was a few scattered bones.

The other two oval structures investigated were Mounds G and I. Both of

these covered burial pits. The pit under Mound G contained at least eighteen individuals, of which six were represented by complete, articulated skeletons and twelve by disarticulated and partial skeletons. Johnston noted that there was a tendency for primary burials—that is, articulated skeletons—to be placed on the bottom of the grave and for secondary burials to occur at a higher level. No grave furnishings were present.

Mound I presented a similar picture, except that the submound pit was both larger and shallower. This pit contained all or parts of twenty-nine skeletons. Again, the primary burials tended to occur towards the bottom of the grave; and again, no grave furniture was present.

The Serpent Mound itself, the salient feature of the site, was 194 feet (59.1 m) long. Of this length, 102 feet (31.1 m) were excavated to subsoil. Unlike the Cameron's Point Mound, the serpent had been built on top of the old humus layer (Johnston 1968:19). Although in the nature of things it is difficult to prove that any large tumulus was built as a unit rather than by accretion, Johnston is of the opinion that the serpent was constructed intermittently over a period of years. This opinion is supported by radiocarbon dates. A charcoal sample (M–850) from the eastern end of the mound was dated at A.D. 128 ± 200; another sample (M–1105), from the western end of the mound, was dated at A.D. 302 ± 150, a spread of 174 years. (Johnston 1968:71)

Apart from the scattered bone encountered throughout the excavation, twenty-five intact burials, either primary or secondary, were recovered. Twelve of these were removed from submound pits; the other thirteen were encountered in the mound fill. Both of these groups included adults and subadults, as well as males and females, and in roughly the same proportions. The groups differed, however, in that both primary burials and grave goods tended to be concentrated in the submound pits, the same tendency that Spence and Harper noted at Cameron's Point.

Only three of the thirteen burials that occurred in the fill were provided with grave furniture: nos. 56, 61, and 62. (Johnston 1968:89)

Burial 56 was the flexed burial of an adult male lying on his left side and heading east. The grave furnishings were all associated with the skull and included the following: forty-one shell disc beads, probably from a necklace, a fossilized coral, the carapace of a painted turtle, several fragments from the carapace of another turtle, part of a bone fish-hook, three flint chips, the fragmentary skull of a mink, and part of the beak of a common loon.

Burial 61 contained the fragmentary remains of an adult who had been cremated *in situ*. Associated with his pelvic area were three copper-foil beads.

Burial 62 was the *in situ* cremation of a partly flexed infant. When placed on the pyre, the child had been wearing a shell bead necklace of several strands. A total of 370 complete beads was found, as well as pieces of 24 others.

In contrast with the fill burials, seven of the twelve burials in submound pits were provided with grave furniture: nos. 1, 2, 6, 7, 28, 60, and 64.

Burial 1 was the tightly flexed burial of a male lying on his right side and heading east. He shared a common grave with burial 2.

Burial 2 was the tightly flexed burial of a female lying on her right side and heading west. The furniture in this common grave could not always be assigned to a particular body, although most of it seemed to be associated with

the male. It consisted of the cut mandibles and maxillae of a timber wolf, one silver and four copper rolled-foil beads, a bird mandible, and a small cluster of bones from some small mammal.

Burial 6 was a primary adult burial. Although the skeleton was in extremely poor condition, enough remained to show that the body had been placed in the grave on its back. Among the ribs, on the left side, was a thin, flint projectile point. This might have been placed there as a grave offering, but it is more likely that it was the cause of death.

Burial 7 contained a small cluster of disarticulated adult bones. Present were the skull, a few long bones, and some stray bits and pieces. Associated with this individual were both halves of the mandible and a few maxillary elements of a bear.

Burial 28 was the primary, flexed burial of a young adult male lying on his left side. Near his skull were found five disc beads of shell, two concretions, four small fossils (one horn coral and three nautaloids), some bones and scales from a sunfish, the beak of a common loon, and a small, carved-in-the-round, limestone effigy representing some small animal.

Burial 60 contained the loosely flexed skeleton of a subadult. Among its ribs, on the left side, was a cache blade fashioned from a blue-grey flint.

Burial 64 contained the flexed skeleton of an adult male lying on its side. A thin layer of wood fibres covered the skeleton, possibly the remains of some light structure that had been built over the open grave. The wood was too badly decomposed to permit of a positive identification but was probably from a conifer. (Johnston 1968:26)

A single item of grave furniture was found, in the knee area of the skeleton. This was a massive, double-bitted adze or pick, fashioned from a fine-grained schist. Almost certainly, this was a ceremonial rather than a utilitarian object. It was plano-convex in profile and 30 cm long; its width and height were both some 55 mm. It weighed 1.79 kg.

Johnston also excavated and reported on an extensive shell midden along the edge of the lake, as well as a number of mass graves that were scattered across the site to the north of the serpent. But that is really a different story.

The LeVesconte Mound

In the summer of 1962, after completing some archaeological investigations west of Peterborough, I had planned to start an archaeological survey of the Trent River and Canal system. Before starting the survey, however, I decided to investigate a find that was reported to the Royal Ontario Museum by the Misses Helen and Lillian LeVesconte of Toronto. The find consisted of a few fragments of human bone and a small flint arrow-point, which they had dug from a high bank immediately behind their summer cottage on the bank of the Trent River.[1] As soon as they recognized the bone fragments as human, they

[1]The LeVesconte Mound is situated on the north bank of the Trent River, about six miles (9.6 km) downstream from Campbellford, Ontario. Overlooking Percy Reach, it sits on a promontory with extremely steep banks some 40 feet (12.2 m) above the river. Specifically, it is located on the

stopped digging, covered the remaining bones in their small pit with a cloth, refilled the hole, and notified the Museum.

When I first saw the small knoll from which the bones had been taken, I concluded that it was a natural formation, for it blended imperceptibly into the ridge on which it was located. There were also some waterworn boulders visible on the surface, and these, I decided, were too heavy to have been carried there by any of the ancient peoples who formerly lived along the Trent River. I was apparently dealing, then, with an isolated burial intruded into a ridge that had been formed by natural agencies during the late Pleistocene.

Cluster 1

To record and remove an isolated burial is usually a simple operation, and so I decided that we would do it immediately and then proceed with our survey. When we had cleaned out the small test-pit, we found the scattered remains of a young child about five years old. Of more compelling interest was a cluster of grave furniture which, like the bones themselves, was within 9 inches (22.9 cm) of the surface. This material was probably wrapped up when it was buried, because the major axes of the bone and antler objects in the cluster were all parallel, tightly bunched, and pointing 30° west of north. There was no remaining evidence, however, of the wrapping material itself.

The cluster of grave offerings, subsequently referred to as "cluster 1", contained the following twenty-four items:

2 pointed whetstones
1 bone "dagger"
2 worked bone fragments
1 piece of worked antler
2 drilled moose toe-bones, 1 with a separate epiphysis
2 moose splint bones
2 sheets of biotite mica
2 unfinished bone daggers
10 splinters from the long bones of some large mammal(s)

The pointed whetstones (Pl. 8D, F) are finished on all surfaces; the larger specimen is 8.8 cm long and 2.5 cm wide; the smaller is 6.2 cm long and 1.8 cm wide.

Fashioned from the distal end of the right metatarsal of a Virginia deer (*Odocoileus virginianus*), the dagger is 16.5 cm long (Pl. 9D and 10D).

The longer of the worked bone fragments (Pl. 11C) is 14.1 cm long and was fashioned from one of the long bones of a large mammal. The sides of the splinter were ground down to form a sharp, chisel-like point at one end; the rest of the splinter is unmodified.

The other worked bone is a dense, massive fragment, probably from a long bone of a bear. Although the tip is missing, it had been ground to a sharp point and was originally about 14 cm long.

Gore in front of Lots 8 and 9, Concession 1, Seymour Township, Northumberland County, Ontario.

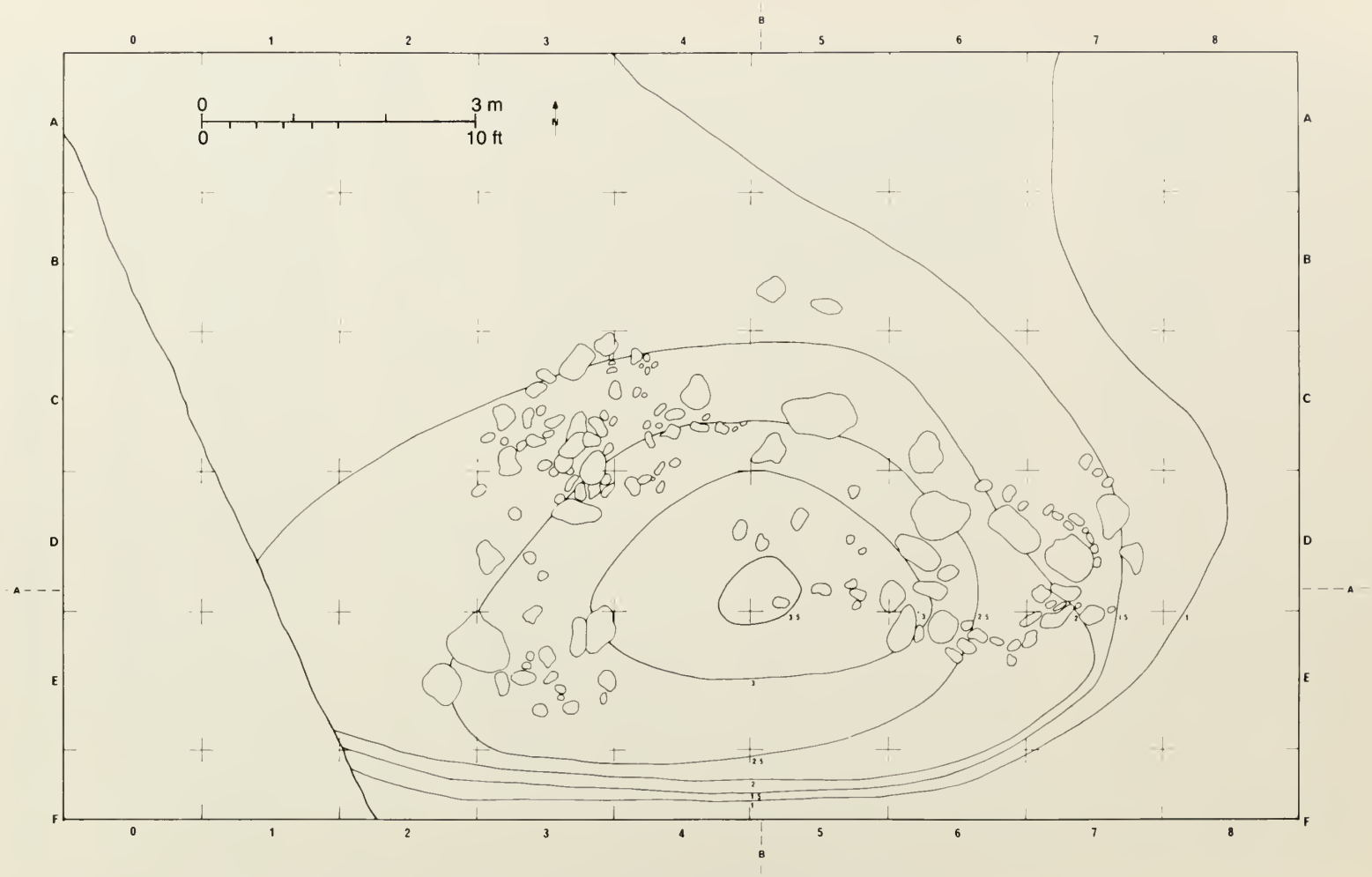

Fig. 8 Six-inch contour map of LeVesconte Mound with rocks appearing at surface of subsoil

Although the piece of antler has been whittled down to a blunt point at one end, it is not possible to assign any particular function to it. The specimen is 23.5 cm long, 3.8 cm wide, and 3.2 cm thick.

Both of the moose toe-bones (Pl. 12A, B) have been drilled longitudinally from the distal end. Although the epiphysis from the smaller specimen is present, it has not been perforated. The epiphysis from the larger specimen is missing. The smaller specimen is the middle phalanx from digit 3 or 4; the larger is the proximal phalanx from digit 3 or 4.

The moose splint bones are 11 cm long.

Only one of the two sheets of biotite mica, the larger one, bears traces of human workmanship. This specimen (Pl. 12D), approximately 10 cm square, has parallel sides that were cut with some sharp instrument: both the upper and lower edges are broken.

The two unfinished bone daggers (Pl. 13B, E) are of particular interest in that they illustrate successive steps in the manufacture of such a specimen (Pl. 14). The people who made these items were clearly utilizing the smooth, rounded surface that is characteristic of the distal end of the metapodial. By splitting off all of the posterior surface of the bone except a small portion at the distal end, the artisan produced a blank such as is seen in Plate 14B. Individual flake-scars on this specimen show that after the dorsal surface had been initially split off, the specimen was roughly shaped by chipping. After the proximal end of the bone had been snapped off (Pl. 14C), the artifact would be ground into its finished form (Pl. 14D).

None of the ten long-bone splinters has been modified. They are simply fragments of mammal bone that exhibit the normal characteristics of green-bone fractures.

About 14 inches (35.6 cm) west of the cluster, and at the same depth, was an isolated dagger fashioned from the distal end of the right metatarsal of a white-tailed deer (Pl. 9E). It is 17.5 cm long.

While we were exposing and mapping the cluster of grave furniture and the dispersed bones of the child, we discovered that there were actually portions of at least three different individuals in our small sample of bone. We discovered that stray pieces of bone were scattered outwards in all directions from our shallow test-pit; and some of them were protruding from beneath the large stones that dotted the surface of the knoll (Pl. 15). We decided, therefore, to extend the excavation laterally in order to determine the extent of the scattered bone deposit. First, however, we laid out a 5-foot (1.5 m) grid system, surveyed the knoll, and drew a 6-inch (15 cm) contour map of the site. Then, after removing the sod, we plotted the position of all the rocks that protruded through the surface of the knoll (Fig. 8).

In excavating the LeVesconte Mound we moved outwards in all directions from our initial test-pit in square 4-D. As we moved across the site, we encountered stray bits of human bone in almost every square. Most of the finds, however, were pieces of bone rather than whole bones, and many of them had been partially charred. From time to time we would find what we thought was a complete skeleton; but almost invariably we were mistaken, for an arm or a leg would be missing, or some of the members would not be in their correct anatomical position. The people who buried their honoured dead at the LeVesconte site were not burying complete bodies, that is, the bodies of

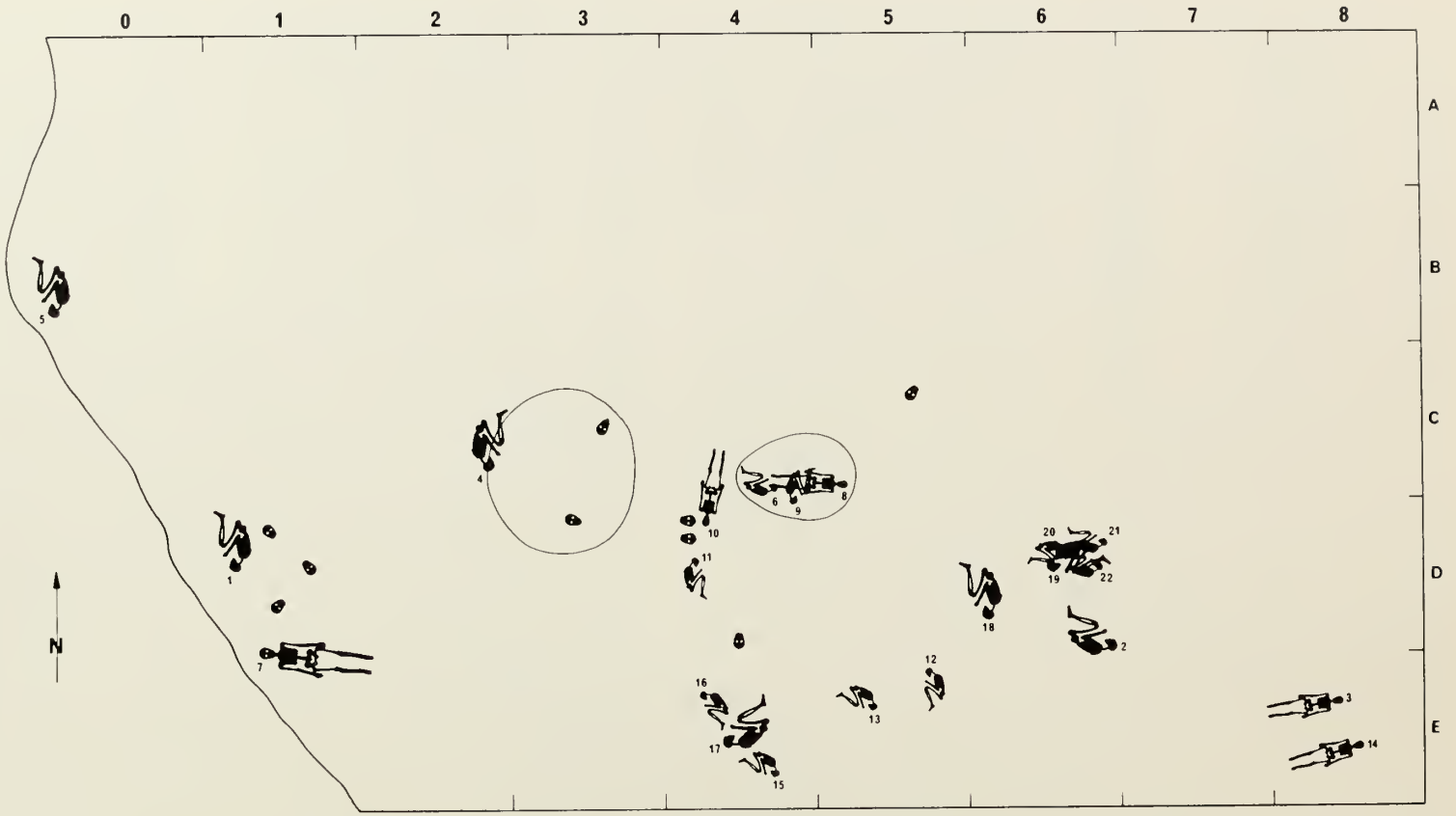

Fig. 9 Horizontal distribution of burials at LeVesconte Mound

people who had died just a short time before interment. They were almost always burying the semi-articulated bodies of people who had died a considerable time before their remains were interred, or who had been totally or partially dismembered prior to burial. The situation was also complicated by the fact that the people who officiated at the burial ceremonies had attempted occasionally to place dismembered skeletal elements in their correct anatomical positions. The body of a young woman in square 1-D, for example, was recorded in the field as a primary burial. Back at the laboratory, however, we found that both the right and left humeri had holes drilled from the proximal end into the marrow canal; but the epiphyses, which had not yet fused, were imperforate. We were forced to conclude, therefore, that all of our field records were suspect in this regard. We know that most of the "bodies" that were buried at the site were semi-articulated at best, and it is quite possible that they all were. The distribution map (Fig. 9) must therefore be approached with caution, for it suggests a degree of order that was certainly not present.

Although only two burial pits were identified during the excavation (Fig. 9), the bottoms of a few more pits or shallow basins were encountered in the eastern half of the mound. These were strangely empty; and none of the pits was dug from the present surface. In addition to the identifiable pits or basins, however, there was evidence of extensive soil disturbance throughout, particularly along the western edge of the mound. The fact that there were no pits associated with most of the burials scattered throughout the mound is related, in my opinion, to the digging and redigging of the mound surface that occurred while the area was being used as a cemetery. The structure was not built as a unit but resulted from a process of accretion. Following the interments in the two graves found at the base of the mound, additional bodies or parts of bodies were placed on the surface of the knoll from time to time and then covered with a thin lens of earth. In scraping up earth to cover successive burials, earlier burials were disturbed and their contents scattered throughout the mound fill. By the time the cemetery was abandoned, it occupied a rectangular area that measured 20 feet (6.1 m) by at least 45 feet (13.7 m). The original dimensions are not available because the western end of the mound has been eroded away.

In addition to these features already mentioned, the mound contained seven clusters of grave furniture, one piece of personal jewellery in the form of a shell necklace, one body that had been cremated *in situ*, one small crematorium, and a few isolated artifacts, mainly potsherds. The clusters of grave goods were numbered in the order in which they were found. Such numbers, then, have no archaeological significance. In describing them, we will start at the western edge of the mound and move across it to the east. This procedure, too, has no significance; it is purely a matter of convenience.

Cluster 7 (Square 0-B)

In square 0-B, at a depth of 1 foot 4 inches (40.6 cm), was a scattered cluster of grave furniture. It may have been associated with the partial skeleton of a child, but such an association is tenuous at best. Although some of the elements were scattered, the skeleton was largely articulated. It was flexed

and lying on its left side, heading south and facing west. The cluster contained the following items:

2 pointed bones
1 conical antler point
1 pointed whetstone
2 copper pins
1 flat whetstone
1 stone "foot"
2 horn corals
8 *Unio* shells
14 deer phalanges
1 right muskrat mandible
1 lower left ground-hog incisor
1 lower right ground-hog incisor
10 lower left beaver incisors
7 lower right beaver incisors
1 upper right beaver incisor
1 upper left beaver incisor
10 beaver incisor fragments

64 items

The larger of the two pointed bones (Pl. 11D) is probably a projectile point, although is may be an awl. Fashioned from a splinter from one of the long bones of a large mammal, its entire surface has been carefully ground into shape. It is 8.2 cm long, 1.3 cm wide, and 6 mm thick.

The smaller specimen (Pl. 16D) is a sharply pointed and carefully worked splinter 4.7 cm long, 4 mm wide, and 2.5 mm thick. It is probably the barb from a composite fish-hook.

The conical antler point (Pl. 17D) is 5.8 cm long and 1.5 cm in diameter. It is tapered to a point that is slightly flattened. A hole in the base of the specimen is 1.1 cm in diameter and 2.1 cm deep. The base of the specimen is either unfinished or eroded.

The pointed whetstone is 28 mm long and 10 mm wide.

The two copper pins (Pl. 16A, B) are expertly fashioned from native copper. The larger specimen is 1.7 cm long, is diamond-shaped in cross-section, and has a major basal diameter of 2 mm. The smaller pin is 1.3 cm long and is square in cross-section, with a basal diameter of 1 mm.

The flat whetstone is an irregular slab of sandstone roughly 6 cm square and 1.5 cm thick. It has a highly polished area on one surface only.

The stone "foot" (Pl. 18) is essentially a natural sandstone formation modified so as to enhance its resemblance to the human foot. It is 6.4 cm high and 7.5 cm long.

The two horn corals (*Streptelasmae*) are 3 cm and 3.9 cm long (Pl. 19A, B). They were probably collected and saved by the Indians because of their similarity to deer toe-bones.

The eight small *Unio* shells are unmodified.

Of the fourteen deer toe-bones, six (Pl. 20) are distal phalanges of digits 3 or 4; the remaining eight are middle and distal phalanges of digits 2 or 5.

The remaining specimens require no comment except to note that two of the beaver incisors were notched for mounting in antler hafts (see cluster 2 below) and that three others were cut diagonally across the labial face.

In square 1-D, the young woman who was mentioned earlier as having holes drilled in the proximal ends of her humeri was buried at a depth of 1 foot (30.5 cm). She was lying on her left side and heading south. Around her neck was a string of 194 *Marginella* shell beads (Pl. 21C). Each of the shells had had its apex ground off so that it could be strung. The method of stringing is illustrated in Plate 21B. This, incidentally, was the only instance in which a personal ornament was associated with a particular body.

Cluster 6 (Square 2-C)

At a depth of 1 foot 9 inches (53.0 cm) in square 2-C the skeleton of an elderly female[1] was found; she was lying on her right side, comfortably flexed and heading south (Pl. 22). After she had been placed on the ground, a line of four overlapping pan-pipes had been placed in front of her left humerus. The cover for the one at the proximal end was a badly crushed, three-reed copper specimen about 7.5 cm long. Next in line, and overlapping it slightly, was another three-reed copper specimen 14 cm long and 4.5 cm wide. The third was a badly crushed silver specimen at least 6.5 cm long. Because it was both crushed and badly oxidized, there is some question as to its original form; I believe, however, that this, too, was a three-reed specimen. The fourth and final pan-pipe cover is another copper three-reed specimen 12.5 cm long and 4.5 cm wide. The reeds were fashioned from elder (*Sambucus*).

Cluster 2 (Square 3-C)

This deposit of grave furniture was found at a depth of 2 feet 9 inches (0.8 m) on the sloping west wall of a large pit that was centred in square 3-C. The pit itself was almost circular (Fig. 9) and about 5 feet (1.5 m) in diameter. It was apparently dug when the surface of the knoll was some 2 feet (0.6 m) lower than it is at present. It was dug with steeply sloping sides that contained an extremely high concentration of rocks (Pl. 23); these were mainly waterworn cobbles, although there were some larger and more angular rocks at the old ground surface. The cluster of grave offerings was wrapped up when it was placed in the grave, for the specimens were very tightly bunched together (Pl. 24). The cluster contained the following items:

3 sharply pointed bones
3 flatly pointed bones
2 worked bones
4 cannon-bone daggers
1 bone chisel
3 hafted beaver-tooth chisels
1 bone "crochet-hook"

[1]All references to age and sex are field determination.

1 conical antler point
1 antler composite fish-hook (?)
1 antler-tine punch
1 pointed whetstone
1 copper gorget
1 conch-shell gorget
1 whetstone
1 tip of a quartz projectile point or blade
12 balanus shell beads
2 copper beads
2 right humeri of the common loon
1 dog maxilla
1 dog mandible
2 lower left ground-hog incisors
2 lower right ground-hog incisors
3 lower left beaver incisors
2 lower right beaver incisors
1 lower right porcupine incisor
2 left muskrat mandibles
1 right muskrat mandible
16 long bone fragments from a large mammal or mammals
5 rib fragments from a small mammal or mammals
6 clam shells

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83 items

The three sharply pointed bones may have been hafted and used as awls, but I suspect that they were fish-taking devices. The largest specimen (Pl. 16H) is 7.4 cm long, 5 mm in diameter, and pointed at both ends. This is probably a gorge. The other two (Pl. 16E, F) are 5 cm and 5.4 cm long, respectively, and 6 mm and 5 mm wide at the base. These are probably parts of composite fish-hooks.

The three flatly pointed specimens (Pl. 25A, B, C) are all splinters from the long bones of some large mammal or mammals. Apart from the flat points, which are carefully fashioned, the bones are largely unworked. They all exhibit a high polish, however, and the sharp edges of the fractures are all worn smooth from repeated handling. In all probability, they were used for stripping bark from trees. They are 14 cm, 14.4 cm, and 15.8 cm long.

The two worked bones are both fashioned from long-bone splinters but, beyond that, cannot be identified.

The four cannon-bone "daggers" (Pl. 9 and 10, A, B, C, and 13A) are 10.5 cm, 11.8 cm, 21.4 cm, and 13.4 cm long, and are all fashioned from the distal end of the bone. The two shorter specimens have flattened points; the larger ones have rounded points.

The bone chisel or scraper is a splinter from a long bone of some large mammal. Apart from the worked end (Pl. 11E), it is unmodified. It is 11.7 cm long and 2 cm wide.

The three antler-hafted beaver-tooth chisels (Pl. 26) were all made for right-handed craftsmen. That is, the lingual surfaces of the beaver incisors all

face upwards when the tool is grasped in the right hand. Two of the teeth have shoulders cut on their lingual surfaces to keep them from sliding through the hole in the haft when pressure is applied; the other is unmodified.

The finely worked but oddly shaped specimen (Pl. 27D) that we called a "crochet-hook" during its excavation still puzzles me. It is fashioned from a long-bone splinter and is 10.9 cm long, but offers no clue as to its function.

The conical antler point (Pl. 17A) is 4.5 cm long and 1.6 cm in diameter at the base. A slightly ovate hole in the base, about 1 cm in diameter, was gouged out to a depth of 1 cm.

The antler specimen that is probably part of a large composite fish-hook (Pl. 11B) is 6.8 cm long and has a maximum diameter of 1 cm. On the outside of the curvature is a shallow notch 1.5 cm wide, which was probably used for lashing this element to the stem of the hook.

The punch is fashioned from a small tine of a deer antler. It is 5 cm long and has been whittled to a smooth, rounded point (Pl. 11A).

The pointed whetstone (Pl. 8E) is 7.7 cm long and 1.8 cm wide.

The copper gorget (Pl. 28B) is 8 cm long and 3.4 cm wide at the bottom end. Although one side and one of the upper corners have been eroded away, the width of the specimen at the top was approximately 2.6 cm. The gorget is 1 mm thick and has a punched oval suspension hole that measures 3 mm by 4 mm.

The conch-shell gorget (Pl. 28C) is 11.7 cm long, with a maximum width of 5.3 cm. Its single suspension hole has been drilled from the outer surface of the shell and tapers from 7 mm to 5 mm in diameter. When the copper gorget was found, it was lying inside the shell specimen and the suspension holes of the two gorgets were in approximate alignment. In all probability the gorgets would have been suspended on a single thong.

The flat whetstone (Pl. 29C) is a roughly rectangular slab of sandstone measuring 10 mm by 16 mm, and 1.5 cm thick. It was used on one side only. One of its edges is carefully worked; this suggests that this specimen was once part of a larger whetstone.

The tip fragment is from a quartzite projectile point or blade that was fashioned from a flake. It is 2.3 cm long and 2.5 cm wide.

The twelve shell beads (Pl. 21A) are fashioned from acorn barnacles (*Balanus*). Their diameters range from 5 mm to 14mm.

The copper beads are 1.2 cm and 1.4 cm long and 4 mm in diameter. They were both made by rolling up short strips of very thin metal.

The remaining specimens require no comment except to say that the dog maxilla and mandible are from the same animal and that one of the beaver incisors has been cut diagonally across the labial face.

Cluster 3 (Square 3-D)

In the southern half of the pit that contained cluster 2, and at the same depth, the third cluster of grave furniture was found. Unlike the previous cluster, which was tightly packed, the specimens in this cluster seem to have been placed in the grave individually. They were scattered about a large, isolated male skull which had been placed upright on the floor of the pit (Pl. 30), although the association may have been fortuitous. The cluster contained the

following items:

1 cannon-bone dagger
1 flat whetstone
1 lower left beaver incisor
1 toggling antler harpoon
2 mammal bone fragments

6 items

The cannon-bone dagger, like all such specimens, was fashioned from the distal end of a deer metapodial bone, with its point on the anterior rather than the posterior surface of the shaft. Dimensions are not available because the specimen was stolen from the excavation.

The flat whetstone (Pl. 29B) is an irregular slab of fine sandstone 14.6 cm long and 1 cm thick. It has been intensively used on both surfaces.

The beaver incisor is unmodified.

The toggling harpoon (Pl. 31) was fashioned by whittling an antler tine to a sharp point. It is 10.7 cm long and has a basal diameter of 2 cm. The line hole measures 5 mm by 8 mm and has been gouged out from both sides with a rodent-tooth chisel, probably a small beaver incisor. An irregular hole in the base of the harpoon is about 1 cm in diameter; measured from the tip of the spur, the hole is 3 cm deep.

Cluster 8 (Squares 3-C, 4-C)

A thin circular deposit of bone about 2 feet 4 inches (0.7 m) in diameter was found in squares 3-C and 4-C. The centre of the deposit was in square 4-C, as was some two-thirds of the material itself. Consisting almost entirely of pieces of long bones with dry-bone fractures, the deposit was placed on what appears to have been the original ground surface between the two burial pits that appear in Figure 9. It is visible as a dark stain in Plate 23. All the bones were parallel with each other and were pointing east and west. Near the edge of the deposit, and northwest from the centre, was a cluster of three bone objects. I doubt that they were placed there intentionally, however, as they were simply aligned with the other bones in that segment of the deposit. I believe, rather, that they were part of a cluster of grave furniture that accompanied the bones at some earlier burial place and that they were moved inadvertently.

The largest specimen in this cluster is 22.5 cm long and was fashioned from the distal end of one of the metapodial bones of a large ungulate, probably a moose. It was fashioned by snapping off the proximal end of the bone and splitting the bone longitudinally; it was then whittled into shape (Pl. 32C) but was never ground into its final form. The purpose of the tool or weapon is therefore unknown.

The other two specimens in this cluster are represented only by fragments which in both cases exhibit dry-bone fractures. Both of them are fashioned from long bones of some large mammal or mammals. The larger of the two (Pl. 32E) has a long, oblique cut across the shaft of the bone. The smaller

specimen (Pl. 32D) was cut off at right angles to the shaft of the bone and then ground smooth. No clue is provided as to the function of these items.

Cluster 4 (Square 5-C)

In the smaller of the two pits in Figure 9 were two clusters of grave goods. The pit itself was oval, with an east-west diameter of 30 inches (0.8 m) and a north-south diameter of 24 inches (0.6 m). It had been dug from the original mound surface to a depth of only 6 inches (15 cm). Both clusters of grave furniture were at the same level as the clusters that were found in the pit mentioned earlier. Buried in this pit were the bodies of two young children. Cluster 4 was on the floor at the eastern end of the pit in square 5-C. It was associated with the body of a young child that had been placed in the grave on its back and heading east. The pieces of grave furniture, found on the right side of the child's torso and above its head, had apparently been placed in the grave separately. They consisted of the following items:

1 large *Unio* shell filled with erythrite
1 silver pan-pipe cover
1 drilled moose toe-bone
3 adze blades
3 lower left beaver incisors
2 lower right beaver incisors
1 distal end of the left metacarpal of a Virginia deer
1 small sheet of silver
1 bone awl

14 items

The *Unio* shell is 14.2 cm long. When we unearthed it, it was sitting up on one end, leaning against the skull of the child. The erythrite, or cobalt bloom, had fallen out of the shell at the time of the burial; the fact that it had fallen out as a solid, shell-shaped lump suggests that the shell had contained a dried-out paste rather than a powder when it was placed in the grave.

The silver object that I have listed as a pan-pipe cover may actually have been something else. Although I believe that it probably was a pan-pipe cover, what I found was merely some thin, curved silver strips. The radius of curvature seemed to be about the same as that of the individual tubes of the copper pan-pipe covers, but none of the pieces had an original edge; that is to say, the edges of the surviving fragments had all been eroded away. The object, whatever it might have been, probably disintegrated because it was so incredibly thin. The surviving fragments are mostly 0.18 mm thick; the thinnest is 0.13 mm thick, or about the same thickness as the paper that this is printed on.

The moose toe-bone is the proximal phalanx of digit 3 or 4. A hole about 7 mm in diameter has been gouged through the distal end.

The three adze blades are all made of schist. The largest (Pl. 33B) is 22.3 cm long and 5.5 cm wide and is triangular in cross-section. It has a curved cutting-edge that is set off-centre; that is, it is more steeply bevelled on one

side than on the other. Another specimen (Pl. 33C) is 11.7 cm long, 4.5 cm wide, and some 15 mm thick. It, too, has a curved cutting-edge that is off-centre.

The remaining adze blade (Pl. 33A) is probably unfinished. It has a smoothly worked cutting-edge, but the sides and poll are merely chipped into shape, in sharp contrast with the other two adzes, which were rather well polished. This suggests that this adze was never completed. It is 11.8 cm long, 5.6 cm wide at the cutting-edge, 3.5 cm wide at the poll, and 11 mm thick.

The beaver incisors require no comment other than that one of them, a lower right, was notched for hafting (Pl. 34B).

The deer metacarpal fragment is unmodified.

The small, irregular sheet of silver, about 4 cm in diameter, weighs 6.7 g. Fragments of the matrix are still adhering to both sides of the specimen, suggesting that the craftsman's efforts to extract a sheet of pure silver from the ore were unsuccessful.

The bone awl, fashioned from the split radius of a large canid, is 10.6 cm long.

Cluster 5 (Square 4-C)

In the western end of the pit in square 4-C was the body of a young child, tightly flexed, lying on its right side and heading a few degrees west of south. Its badly crushed skull was resting on the pelvis of the other child. Associated with the child, and at the very end of the pit, was the final cluster of grave furniture from the site, cluster 5. It contained the following items:

1	cannon-bone dagger
1	antler bead
3	pointed whetstones
1	bear canine
1	conical bone point
1	flat bone point
1	conical antler point
4	side-notched antler points
1	copper pin
1	copper pan-pipe cover
17	fragments of silver from 3 pan-pipe covers
1	bone pin
2	flint chips
1	flat, triangular bone object
1	perforated shark's tooth
10	pieces of unworked silver and silver ore
3	*Unio* shells
1	*Unio* shell filled with erythrite
1	red fox muzzle
1	lower left beaver incisor
18	mammal bone fragments
71	items

The dagger is fashioned from the distal end of the left metatarsal of an immature Virginia deer. It is 12.1 cm long and has been whittled to a flat point (Pl. 13C).

The antler bead is 10 mm long, 11 mm wide, and 6 mm thick. It has a drilled suspension hole 2 mm in diameter.

One of the pointed whetstones is too seriously eroded to yield any reliable measurements. The other two are illustrated on Plate 8. The larger of these (C) is 6.2 cm long and 1.4 cm wide; corresponding measurements for the smaller specimen (B) are 3.3 and 1 cm.

The upper left bear canine is unmodified.

The conical bone point (Pl. 17C), fashioned from the radius of a large mammal, is 11.5 cm long. Shallow notches cut on each side of the point, just above the base, were presumably for line attachment if the specimen was to be used as a harpoon, or for lashing it to the end of a shaft if it was a lance or spear point. The marrow canal had been broadened and tapered at the base to facilitate hafting.

The conical antler point (Pl. 17E) is 7.7 cm long. It is a tine, superficially modified by being ground to a slightly flattened point.

The flat point (Pl. 27F), fashioned from a splinter of mammalian long bone, is 9 cm long, 1.2 cm wide, and 4 mm thick. Its gently tapering base has been ground to a thickness of only 2 mm. A shallow, transverse groove is located on the upper surface of the specimen (i.e., the cortex) 1.5 cm from the base. The oval base of the specimen is 2.5 cm wide and has been carefully smoothed off with what was probably a hafted beaver incisor. A circular hole 9 mm in diameter was drilled into the base to a depth of 3.2 cm.

The four side-notched antler points (Pl. 27A, B, C, E) range in length from 4.5 cm to 6.4 cm, in width from 2 cm to 2.8 cm, and in thickness from 5 mm to 8 mm. One (E) has been pierced by a 5-mm hole, just above the notches; another (B) was lightly charred on its base before it was placed in the grave. Most of the base is missing from this specimen, as is the entire base of the previous specimen.

The copper pin is 3.5 cm long and is roughly square in cross-section with a diameter of 3 mm across the flats. It was probably the tip of a composite fish-hook.

The copper pan-pipe cover (Pl. 35A) is 12.6 cm long and 4.3 cm wide. It has a maximum thickness of 1.5 cm, which is probably close to its original measurement. It is a three-reed specimen fashioned from a large rectangle of thin copper with an average thickness of 0.51 mm. On the back of the specimen (Pl. 36A), the ends of the copper sheet are simply overlapped, as they were on the previous specimens, with apparently nothing to hold them in place except the rigidity of the metal itself. The six holes in the back of the specimen were not made for fastening the ends of the sheet of copper together, as they do not align. Also, they were all punched from what is now the inside of the object, and must therefore have been punched in the metal while it was still a flat sheet. When it was in that condition, there would have been one hole at each corner of the rectangle, possibly for pinning it down to some flat surface while it was being ground smooth. The other two holes were probably made to mend a crack that appeared in the edge of the rectangle during the process of fabrication.

The seventeen small fragments of what I think are silver pan-pipe covers have the same characteristics as those in the other cluster of grave furniture in this pit. One of them is an end fragment (Pl. 37D) from what looks like one of the tubes in the copper pan-pipe cover discussed in the previous paragraph. From the location of the silver bands within the cluster, it was evident that the pieces were from three different objects.

The bi-pointed bone pin (Pl. 16G) has one of its tips broken off and is now 5.4 cm long. It is almost circular in cross-section and about 4 mm in diameter. The intact end has been whittled into shape, then ground to a sharp point and highly polished. This was probably part of a composite fish-hook.

The two flint chips are nothing more than chipping detritus.

The flat, triangular bone object is 6.3 cm long and 2 mm thick. Before part of one side and one corner were eroded away, it was approximately 4.5 cm wide at the base. A series of shallow parallel lines was scratched on both sides of the object, parallel to the edges. Its function is not known.

The tooth of a great white shark, *Carcharodon carcharias*, is pierced for suspension (Pl. 28A) by a single hole 4 mm in diameter.

The ten pieces of silver and silver ore (Pl. 37) are not remarkable except for one triangular specimen of pure silver (Pl. 37H) that is 5 cm high and weighs 94.7 g.

The three small *Unio* shells, each about 6 cm long, are unmodified.

The larger *Unio* shell—the one filled with erythrite—is 10 cm long and is also unmodified.

The red fox muzzle has been broken off just behind the teeth.

Apart from the fact that one of the mammal-bone fragments is highly polished, but for no apparent reason, the remaining specimens in this cluster are unremarkable.

Other items

In addition to the eight clusters of grave furniture and the *Marginella* shell necklace that have already been described, a number of other artifacts and animal bones were found in the mound fill, as well as one marine shell. These items are listed below:

1 unmodified marine shell
2 flint projectile points
1 basalt projectile point
1 dark quartzite spear point
1 dark quartzite blade
1 canid atlas
1 deer mandible fragment
19 potsherds
9 turtle bones
1 tip fragment from a bone awl or harpoon
1 modified deer antler tine
1 fragment of worked bone
1 flint drill

6 unmodified flint chips
1 fragment of silver

47 items

The saltwater shell is a *Nerita tessellata*, native to Bermuda, Florida, and the Caribbean.

One of the flint points (Pl. 19C) is a stemmed specimen 4.2 cm long and 2.1 cm wide; the other (Pl. 19H) had broad, shallow side notches and is 2.6 cm long and 2.1 cm wide.

The basalt point (Pl. 19F) is 3.1 cm long and 1.9 cm wide.

Although its stem or base is missing, the quartzite spear point (Pl. 19D) is still 6.4 cm long. It is a sharp, well-made weapon, smoothly lenticular in cross-section, 2.9 cm wide and 1.1 cm thick.

Fashioned from a flake of dark quartzite, the blade (Pl. 19G) is 6.3 cm long, 4.6 cm wide, and 1.4 cm thick.

The small sample of decorated specimens among the nineteen potsherds (Pl. 38) identifies the collection as having been made by the Point Peninsula people. They were probably made by the same group that camped on the LeVesconte property, just at the foot of the bluff.

The turtle bones are from a Midland Painted (*Chrysemys picta marginata*) and a Blandings (*Emydoidea blandingi*).

The tip fragment from the bone awl or harpoon is 6 cm long and 1.8 cm wide. Fashioned from one of the long bones of a large mammal, the specimen is ground to a very sharp point and is highly polished (Pl. 39A).

The flint drill (Pl. 39B) appears to be complete. It is 4.5 cm long, 1.2 cm wide, and 7 mm thick.

The fragment of silver, about the size of an aspirin tablet, was found in square 6-D. It may have been associated with the flexed burial of a tiny infant that we found at a depth of 2 feet 4 inches (0.7 m). The piece of silver was adjacent to the left scapula of the child, but there is no reason to believe that the association was not fortuitous.

The remainder of the specimens require no further comment. There are, however, some data that have not yet been introduced—a small crematorium with a partially cremated body *in situ*, and three radiocarbon dates for the site.

The crematorium (Pl. 40) was a circular deposit of ash and calcined bone fragments in square 6-D at a depth of 1 foot 6 inches (45.7 cm). It was 2 feet (60.9 cm) in diameter and had a half-circle of limestone cobbles marking its northern rim. Across the southern edge of the crematorium was the semi-articulated body of a mature individual lying on its right side and heading a few degrees south of east. The spinal column was intact, as was the pelvis, but the skull and both legs had been detached through either natural or mechanical agencies. The right leg, for example, was found behind the torso, fully extended, with the foot at the back of the head. The left arm must have been moved after the fire had gone out, as it was lying directly on top of the deposit of ash and calcined bone fragments but was itself unburned.

The ventral surface of the thoracic and lumbar portions of the spinal column were heavily charred, as was the ventral surface of the sacrum. The dorsal surface of these skeletal elements, however, was completely unburned. None

of the appendages showed any evidence of burning except for the lateral epicondyle of the right humerus.

A charcoal sample from the crematorium yielded a radiocarbon date of A.D. 780 ± 95 (S–211). As this date is inconsistent with other Point Peninsula dates from Ontario, two bone samples were also submitted for dating. These yielded more acceptable dates of A.D. 120 ± 50 (DIC–107) and A.D. 230 ± 55 (DIC–732).

Mounds in Northern Ontario

Most of the fur-traders, explorers, and missionaries who pushed westwards from Lake Superior failed to comment on the burial mounds scattered along Rainy River. There were exceptions, however, such as Henry Youle Hind (1859), who led his Red River exploring expedition down the Rainy River in 1857 and reported as follows:

> At the second or Long Rapids an extensive area denuded of trees presents a very beautiful prairie appearance. Here we landed to examine two immense mounds which appeared to be tumuli. We forced our way to them through a dense growth of grasses, nettles, and helianthii, twisted together by the wild convolvulus. On our way to the mounds we passed through a neglected Indian garden, and near it observed the lodge poles of an encampment. The garden was partially fenced, and contained a patch of helianthii, six and seven feet high in the stalk, and just beginning to show their flowers. The wild oat attained an astonishing size, and all the vegetation exhibited the utmost luxuriance. The mound ascended was about forty feet high and one hundred broad at the base. It was composed of a rich black sandy loam, containing a large quantity of vegetable matter.

Hind was among the first of a new breed of men that appeared in the area towards the middle of the 19th century. These men were interested in the rapidly expanding Red River settlements, and because of that interest were viewing the entire area in a new light. The old canoe route to the west was still the voyageurs' highway, and parts of it still provided access to the annual harvest of furs from the Athabaska country and the slopes of the Rockies. But both the Rainy and the Red rivers flowed through rich arable land, and settlers were swarming into the area, particularly into what is now Manitoba. In the eyes of the settlers and the new breed of explorers, the land had valuable qualities that could be developed and exploited, qualities that had nothing to do with its navigable rivers or the teeming herds of animals that scampered and thundered across its surface. With their attention focused on the land itself rather than on some future profit or shimmering horizon, these newcomers noticed that the river banks were dotted with strange mounds of earth.

The first person to express a professional interest in the Rainy River mounds was George Bryce, a professor at Manitoba College, and the president of the Manitoba Historical Society. Bryce paid his first visit to Rainy River in 1884 and reported (1904:14) that there were no fewer than twenty-one mounds scattered along the river between Rainy Lake and Lake of the Woods. Although he did all or most of his work at the Grand Mound on the Minnesota side of the river, Bryce concluded that the Rainy River mounds were of the

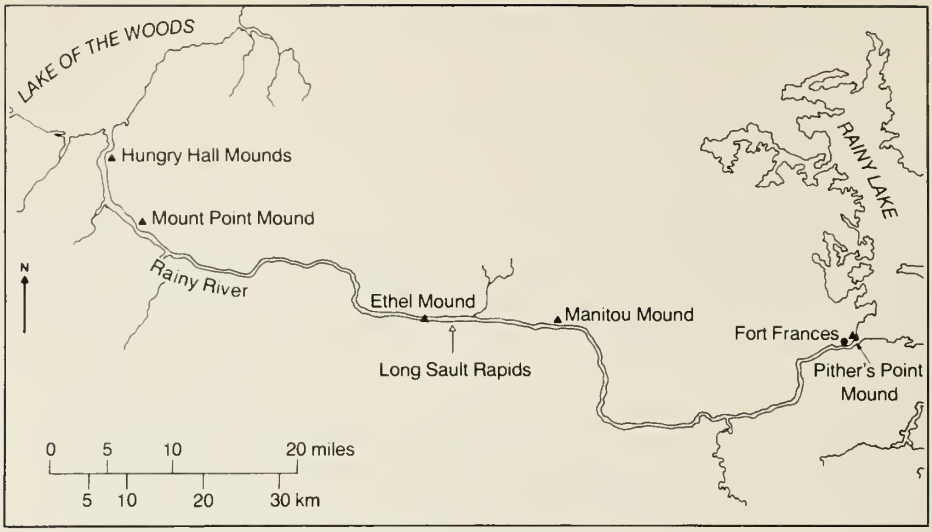

Fig. 10 Distribution of burial mounds in northwestern Ontario

same type as those on the banks of the Red River. Some of the latter had already been excavated, with the results neatly summarized by C. N. Bell.

It was twenty-six years after the pioneering article of Wallbridge that Bell published his article *The Mound-Builders in Canada* (Bell 1886). In spite of its energetic title, the article deals primarily with the mounds in southern Manitoba and in the Rainy River District of Ontario. Although Bell refers to "the mound-builders" at several places in his text, as well as in the title of his essay, he was not convinced that the mounds were actually the work of some earlier race of people, some group that inhabited the area before the appearance of the Indians. In fact, one of the basic questions to be answered through archaeological investigations, he said, was "whether the Mound Builders were Indians or a different race of men" (Bell 1886: 137). But he did note, as Wallbridge had noted during his discussion of the Bay of Quinte mounds, that the Indians who occupied the area during the historic period had no knowledge of the mounds. They knew that they were artificial structures but had no opinion as to who might have built them. Bell, on the other hand, recognized them as a northern expansion of a mound-building group or groups whose centre of activities was far to the south. He recognized, too, that there were different kinds of mounds, for he mentions "the pyramidal mounds of the Southern States, the embankments of the Ohio, the stone graves of Tennessee, and the effigies of Wisconsin".

In 1867, Bell tells us (1886: 131),

> two of the ordinary burial mounds of the truncated cone form were discovered on the right bank of the Red River in Manitoba, or as it was then called, the Selkirk settlement[1]. Some interesting remains were taken from them, including human and animal bones, and skulls; ornaments of shell, bone and stone; implements of stone,

[1]These are the same mounds that George Bryce discussed in his 1885 and 1904 publications. They were excavated, apparently, by the Historical and Scientific Society of Manitoba.

> and pottery, all of which (like too many of our Canadian archaeological treasures) were exported to enrich foreign museums...A brief description of a group of mounds at St. Andrew's, Manitoba, 18 miles north of the city of Winnipeg, will serve to show that in general character, they are almost identical with one class of those of the Ohio and Mississippi, as reported on by Messrs. Squier and Davis (1848) and other archaeologists of the United States.

Bell described two mounds in this group. One was an oval structure with a major diameter of 75 feet (22.9 m), a minor diameter of 65 feet (19.8 m), and a height of 8 feet (2.4 m). The mound was built of "a rich loamy earth". Although Bell's excellent description of the excavation is rather difficult to follow at this point, it would appear that the mound was built in two stages. The original mound was 4 feet (1.2 m) high, but this was capped, at some later date presumably, by an additional 4 feet (1.2 m) of earth. The upper level was riddled with intrusive burials that had been placed on their backs, apparently, and were without grave furniture. Near the base of this upper level, and at the west side of the mound, was the skeleton of a man who had been buried in a sitting position. Although he too had been buried without grave offerings, his grave had been covered with oak logs.

At the base of the mound (i.e., at the original ground level) "a platform or layer of round stones was found, beneath a smooth burnt clay floor". This feature, Bell tells us, was very similar to the "clay altars" described by Squier and Davis. Also at the base of the mound, near its western edge, was the skeleton of a large male who had been buried in a sitting position, facing east. He was surrounded by "several piles or bundles of bones, each surmounted with a skull". These were individual bundle burials that "had evidently been brought there for reburial about the central figure". Associated with this central figure were a number of items. At his chest was a round polished gorget cut from the shell of a conch, probably a *Busycon perversum*. It was 4 inches (10 cm) in diameter with a circular hole, $1\frac{1}{2}$ inches (3.8 cm) in diameter, in its centre and two small suspension holes near the rim. Like the skull itself, the gorget was stained with red ochre. Near the figure's waist were two steatite tubes, and at his side was a very small clay pot filled with red ochre.

The second mound opened by Bell is described only in broad, general terms. It was "a few hundred yards" from the first one he excavated, and contained

> human and animal remains, earthern pots, rough stone mauls, deer horns, and a pin or hanging ornament (i.e., a pendant) $5\frac{3}{4}$ inches long and $\frac{3}{4}$ of an inch thick, formed from the columella of a seashell, probably of a *Busycon perversum*.

Bell also found a gorget $9\frac{1}{2}$ inches (24.1 cm) long and 3 inches (7.6 cm) wide. It had curved ends and had probably been fashioned from a turtle shell.

East of Manitoba, Bell notes that "over 20 mounds have been identified on the banks of the Rainy River, part of them being in the territory of the United States, the river here forming the boundary line between it and Canada". He warns us, too, that "few of the mounds in this region remain intact, and steps should be taken immediately to preserve the small number left".

Beginning in 1957, I excavated five mounds on the north bank of Rainy River, and one on Oak Point Island at the eastern end of Rainy Lake. I will describe these sites (Fig. 10) in the following order:

Hungry Hall, Mound 1
Hungry Hall, Mound 2
Mound Point
The Armstrong Mound
The Pithers Point Mound
The Oak Point Island Mound

Apart from convenience there is no significance in this order.

Hungry Hall, Mound 1

The Hungry Hall site is situated on the right or north bank of Rainy River about 3 miles (4.8 km) from Lake of the Woods. Named after the Hungry Hall post which the Hudson's Bay Company built there about 1850, the site is now occupied by Leland and Mary Budreau's Oak Grove Camp. Specifically, the site is in the northwest quarter of Section 16, Atwood Township, Rainy River District, Ontario. About 2000 feet (0.61 km) upstream from the Budreau residence were two mounds, both sitting on the very edge of the low, flat river bank; they were about 10 feet (3.0 m) high at this point and separated by a shallow ravine. From centre to centre, the mounds were 229 feet (69.8 m) apart.

When we started work at the site, Mound 1, the nearer to the Budreaus' house, was almost totally obscured by hazel brush, and large portions of it, perhaps as much as one-third, were missing, having been eroded away by the river. When the mound had been cleared of brush, it was found that the surface of the structure was dotted with ground-hog holes and had also been extensively potted by curio hunters (Pl. 41). Only a few small portions of the original mound surface appeared to be intact, and those were near the edges. The remaining portions of the mound had a major diameter of 40 feet (12.2 m) and a minor diameter, at right angles to the river, of 25 feet (7.6 m). Originally, the mound was probably no more than 4 feet (1.2 m) high. In front of the mound, the river was flowing 29° west of north, or 331° magnetic. Using that line as north, we laid out a grid system of 5-foot (1.5 m) squares at right angles to the river bank.

As soon as we started to remove the sod from the mound, we encountered scattered fragments of human bone, pieces of broken pottery, and food refuse in the form of mammal, bird, and fish bones. Continued excavation showed that the mound fill had a high organic content, as well as a high artifact content. As we approached the northern limits of the mound, however, both of these decreased markedly, with the fill becoming gradually more sterile and lighter in colour. The mound was clearly built of earth that had been scraped from the surface of a habitation area, and the differences in colour, texture, and artifact content in the northern portions of the structure were caused by a higher percentage of subsoil in the fill that was used there. That is, the builders had

simply scraped off a thick layer of earth when they were building that part of the mound.

The first bodies we encountered were those of infants or very young children that were found while we were cleaning up the eroded edge of the mound. We noted at the time that the bodies appeared to have been individually wrapped in birchbark when they were interred, although much of the bark had subsequently decayed. In addition, they were all disturbed, a condition that we attributed to the ground-hog burrows that riddled the entire centre of the mound, and to erosion and vandalism. As we moved eastwards from the eroded edge, we encountered pockets of disarticulated adult bones, which also appeared to have been wrapped in birchbark. From time to time we would find a small clay pot or other artifact among the bones, but we were unable to associate these with any particular burial.

A pattern slowly emerged, however. When we had exposed the entire centre of the mound and taken it down to within 18 inches (45.7 cm) of subsoil, we encountered the upper levels of a circular pit 8 feet (2.4 m) in diameter, which was lined with birchbark (Pl. 42 and Fig. 11). Within the ring of birchbark, and at the same level as its upper edge, was the secondary burial of an adult male (Fig. 11, A), which was probably intrusive. During this phase in the excavation, we also cut a trench through the mound between 5 and 10 feet (1.5 m and 3.0 m) north, starting from outside the structure on the east side and continuing through to the river bank. On the walls of the trench, particularly on the eastern portions of the north wall, two different strata of earth were clearly visible; and on the surface of the lower strata was a thin layer of charcoal, ashes, charred logs, and saplings. Clearly, the mound had been built in two stages; and at some point a fire or fires had been built on the surface of the earlier structure.

Towards the western end of the trench (Fig. 11, NC) was a multiple secondary burial, which we referred to as the "north cluster" (Pl. 43 and 44). We were still finding stray bones in the trench, as we did throughout the mound, but the north cluster was not simply a higher concentration of scattered bones; it was a deliberate burial placed in a grave that had been dug down to subsoil from the surface of the primary mound.

East of the central pit (Fig. 11, EC) was another multiple secondary burial, which we referred to as the "east cluster" (Pl. 45). This, too, was probably an intrusive burial, but repeated disturbances had obliterated any soil profiles that might have solved the problem.

About 3 feet (0.9 m) southeast of the pit (Fig. 11, B) was the secondary burial of a male between twenty-five and thirty years old. This was probably intrusive, although the disturbance of the overlying strata makes any such attribution suspect. But it was above the cluster of bodies that had been wrapped in birchbark and appeared to have been deposited separately and at a later date.

About 6 feet (1.8 m) southeast of the pit was another secondary burial (Fig. 11, C), that of a mature male (Pl. 46). Like the north cluster, this was an intrusive burial, but the grave had been dug down to subsoil from the surface of the upper or secondary burial mound.

At this stage in the excavation, we had removed the greater part of the centre of the mound and had taken several trenches down to subsoil. But we

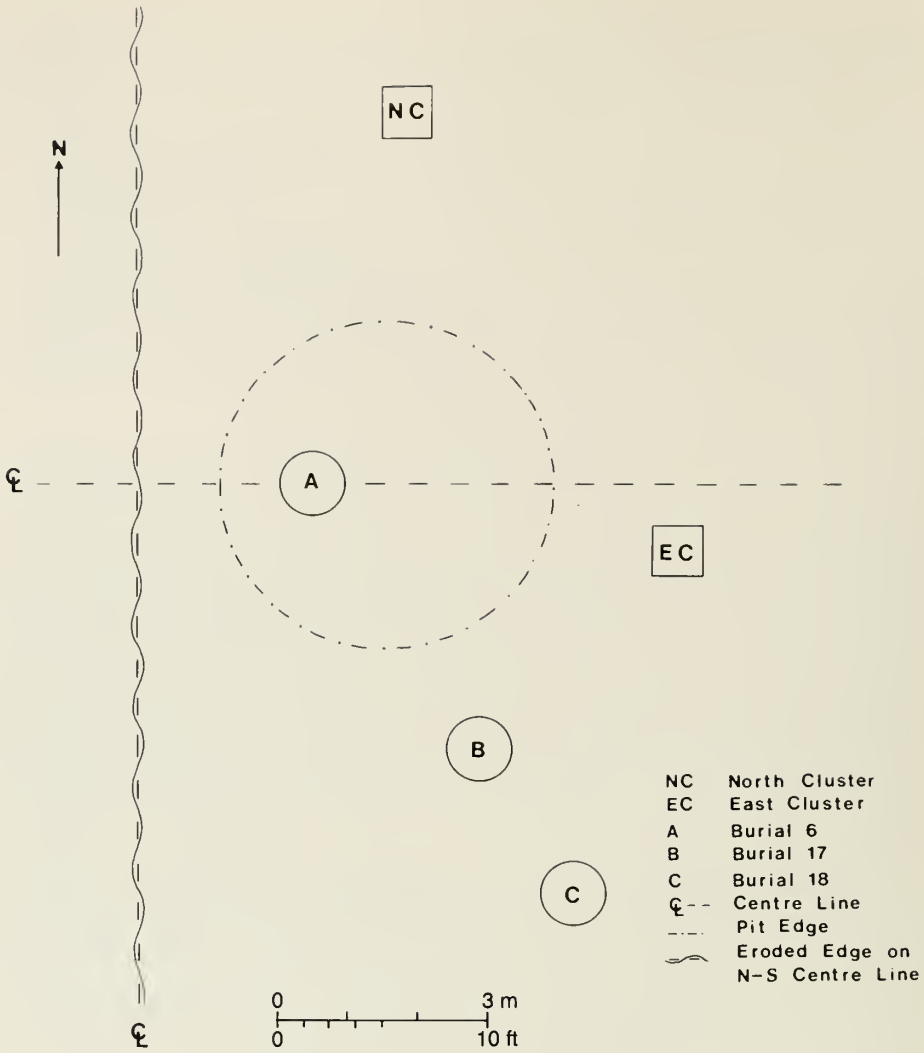

Fig. 11 Floor plan of Mound 1, Hungry Hall

had left an island about 10 feet (3.0 m) square in the centre of the mound (Pl. 47), an island which encompassed the central pit mentioned earlier.

When we started excavating the pit itself, we found that the concentration of ash and charcoal was much higher there than it was in the rest of the mound. As we proceeded downwards, this concentration increased, until at times we were digging through solid deposits of oak charcoal. Fragments of bones were also encountered from time to time, and at least two small secondary deposits of cremated human bone were found. As we approached subsoil, we discovered that when the pit was dug it had cut through an earlier deposit of burials. This deposit was the group of disturbed burials that had apparently been individually wrapped in birchbark and that we had first encountered when we were cleaning up the eroded western edge of the mound. Although we had initially referred to this group of burials as the

southwest cluster, we had subsequently learned that it formed a relatively continuous deposit around the western, southern, and eastern edges of the pit.

When the pit was dug, it had cut through the original layer of burials, i.e., our southwest cluster. During the process, the bones and artifacts that the diggers encountered were simply thrown out and scattered across the surface of the original mound. Then, when every trace of the original burials had been removed from the bottom of the pit, another smaller pit was continued downwards. This smaller pit was very irregular both in outline and cross-section, but was roughly oval, with a major diameter of about 5½ feet (1.7 m) and a minor diameter of 3 feet 11 inches (1.2 m) (Pl. 48). It was about a foot (30 cm) deeper than the main pit and had an extremely irregular floor. At the bottom of this smaller pit, but extending up its sloping northern wall and onto the floor of the larger pit, was a deposit of secondary burials and a rich assortment of grave furniture.

This rather complex picture is the result of an archaeological excavation that produced a body of data and enabled us to place a number of separate events in a sequential relationship. It will probably simplify matters considerably if we pause at this point to examine that sequence.

About 900 years ago, a group of people who made pottery that we identify as Blackduck dug a broad, shallow, saucer-shaped depression in the earth near the mouth of the Rainy River. The depression was roughly circular, with a diameter of about 10½ feet (3.2 m) and a maximum depth of 2 feet (0.6 m). Individual skeletons were then wrapped in birchbark matting and placed in the shallow pit. Although a few were accompanied by grave furniture, most of them lacked such offerings. The individual skeletons, in turn, were derived from bodies that had been exposed at death until the flesh had disintegrated, as well as from bodies that had been dismembered. Evidence of the former is present on the bones in the form of tooth-marks of both rodents (probably porcupines) and carnivores. Evidence of the latter is present in the form of cut-marks at the ends of some of the long bones and at the bases of some of the skulls. These were made in the process of severing the heavier tendons and ligaments that bind the larger skeletal elements together. Occasionally, a member of this group would have had his brain removed after a circular hole had been punched through the occipital region of the skull (see Pl. 44). Finally, when all the bodies had been placed in the saucer-shaped depression, a low mound of earth was heaped over the mass grave. In all probability, the mound was no more than 30 feet (9.1 m) in diameter and 2½ feet (0.8 m) high.

At some later date, an intrusive grave was dug some 10 feet (3.0 m) north of the centre of the mound for the mass secondary burial that we referred to as the north cluster. Still later in the sequence of activities, a third group of bodies was placed in a central pit 8 feet (2.4 m) in diameter, which was dug from the top of the mound, down through the cluster of bodies that filled the shallow depression, and about a foot (30 cm) into the subsoil. A scattering of bones and grave furniture was then placed in the bottom of the pit and covered with about a foot (30 cm) of earth. At about the same time, large parts of the mound surface were covered with small logs up to 8 inches (20.3 cm) in diameter, which were then burned *in situ*. Although the purpose of the fires could not be determined, they were probably crematoria. In any event, much

of the ash and charcoal that resulted from the fires was gathered up and thrown into the pit, together with bits of calcined bone. A charcoal sample from these fires yielded a radiocarbon date of A.D. 1130±65 (S–1130). Some of the bones had almost certainly been cremated in the upper levels of the pit itself, however, as we found clear evidence of such activity at three separate spots.

The birchbark ring that lined the sides of the pit was at least 13 inches (33 cm) high and was formed of three layers of bark carefully stitched together, with the grain of the inner layer at right angles to that of the two outer layers. The bottom edge of the ring seemed to be at about the same level as the original ground surface.

Two items of grave furniture were associated with burial 6: a projectile point and a stone sucking-tube.

The projectile point is an unusual specimen for the Rainy River District. Fashioned from translucent chalcedony, it is 6.4 cm long, 1.1 cm wide, and 6 mm thick (Pl. 49A).

The sucking-tube is a thin-walled specimen fashioned from mottled steatite. It is 6.8 cm long and has a maximum diameter of 2.3 cm (Pl. 50A).

With the north cluster, the only item of grave furniture was a small pinch-pot (Pl. 51H and 52A). It is 5.8 cm high and 5.9 cm in diameter and has a capacity of 81 ml. Decoration, which is confined to the rim and neck, is illustrated in Figure 12. The vessel appears to have been stained with a thin film of powdered haematite, which was rubbed into the surface of the vessel both inside and out.

Although the amount of disturbance in the area introduces an element of uncertainty, the following pieces of grave furniture were probably all associated with the east cluster:

3 clay pots
parts of 4 other pots
4 *Unio* shells
7 discoidal shell beads
1 copper bead
2 scrapers
2 olive shell beads
2 bone awls
2 worked bones

The largest pot (Pl. 51L and 53C) is 7.9 cm high and 10.1 cm in diameter and has a capacity of 340 ml. Decoration on the rim and lip was applied with a cord-wrapped stick (Fig. 13). A horizontal line of small, shallow punctations on the neck of the vessel completes the decoration. The body has the slightly irregular surface that is usually associated with a pinch-pot.

The smallest of the three pots (Pl. 54) is 6.2 cm high and 7.9 cm in diameter and has a capacity of 145 ml. This specimen, too, is probably a pinch-pot. Lip decoration, at right angles to the rim, was applied with a cord-wrapped stick. Exterior decoration is illustrated in Fig. 14.

The remaining pot (Pl. 51G and 55C) is 6.8 cm high and 8.4 cm in diameter and has a capacity of 200 ml. This specimen, also a pinch-pot, has a corded lip. Exterior decoration is illustrated in Fig. 15.

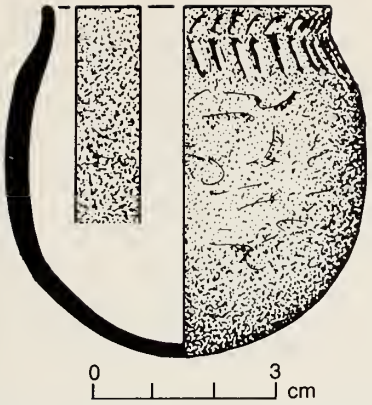

Fig. 12 Clay pot, no. 27, Hungry Hall, Mound 1

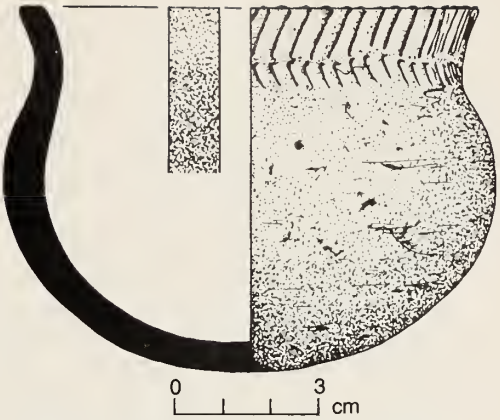

Fig. 13 Clay pot, no. 3, Hungry Hall, Mound 1

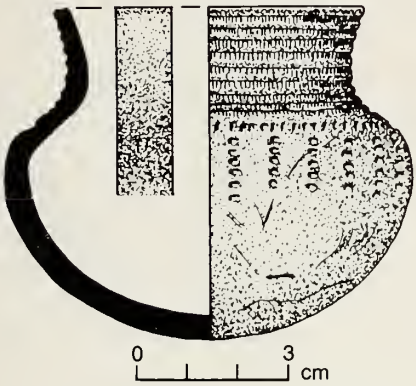

Fig. 14 Clay pot, no. 4, Hungry Hall, Mound 1

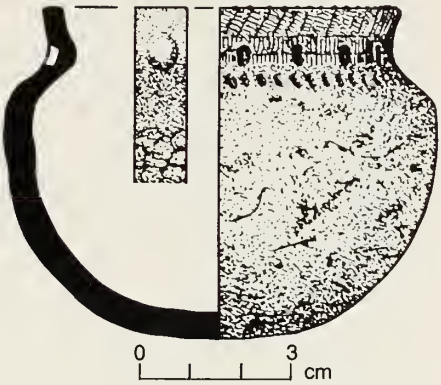

Fig. 15 Clay pot, no. 30, Hungry Hall, Mound 1

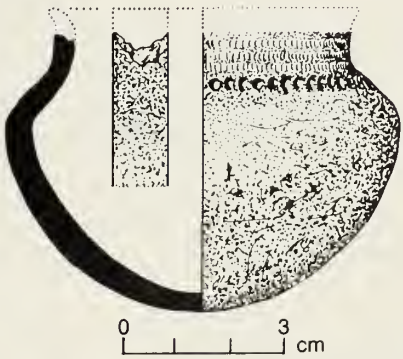

Fig. 16 Clay pot, no. 29, Hungry Hall, Mound 1

One of the four remaining pots is represented by a large part of the body and neck, although all of the rim is missing. The drawing (Fig. 16) should be reasonably accurate, however, suggesting a height of some 6.9 cm; the diameter of the vessel is 7.2 cm.

The second specimen in this group is represented by only two undecorated rim-sherds. These have a radius of curvature that suggests a small vessel with an oral diameter of 6.5 cm.

The third specimen in this group is represented by three rim-sherds from a small Blackduck vessel. Their radius of curvature suggests that the vessel had an oral diameter of some 9.5 cm. Decoration consists of a corded lip, vertical cording on the rim, four horizontal lines of very fine cording on the neck, and one horizontal line of small oval punctations on the shoulder, just below the neck decoration. The body is vertically corded.

The fourth and final pot in this series (Pl. 56) is represented by most of the upper portions of an odd-shaped vessel that has an oral diameter of 7.0 cm and was probably some 8 cm to 9 cm high. From the bottom of the poorly defined rim to its sharp, angular shoulder, the vessel was a truncated cone 4 cm high. The globular base exhibited vertical cording on the few surviving fragments. Apart from an irregular, incised line at the base of the rim, decoration consisted entirely of punctations.

The four *Unio* shells, probably used as spoons, are unmodified. The seven discoidal shell beads range from 8 mm to 10 mm in diameter but are quite irregular as to thickness.

The small copper bead was completely disintegrated; we noted its presence but were unable to record any metrical data.

One of the two scrapers is a thin, triangular chalcedony flake (Pl. 49D) worked along one side; the other is a rectangular agate end scraper (Pl. 49B) 3.6 cm long, 5.8 cm wide, and 9 mm thick. It was fashioned from a large spall.

Both of the olive shell beads have their apices ground off for suspension but are otherwise unmodified.

The shorter bone awl (Pl. 57A) was fashioned from the left radius of a common loon. It is 10 cm long and has faint transverse scratches on both sides; the longer awl (Pl. 57B) was fashioned from one of the long bones of a large bird, probably from the femur of a crane or heron. It is 16 cm long and 1.1 cm wide.

The longer of the two worked bones is the right radius of either a bald or golden eagle. It is 20 cm long. The shorter specimen is a bird-bone tube 11.8 cm long, with one finished end and one broken end. A series of faint scratches and notches marks the surface of the specimen.

In probable association with burial 17 was a steatite sucking-tube (Pl. 50B). It is a thin-walled, highly polished specimen, 6.1 cm long and with a maximum diameter of 2.3 cm.

The following items were found in the southwest cluster but could not be associated with any particular individual:

1 clay pot
parts of 4 clay pots
1 *Unio* shell
1 antler object

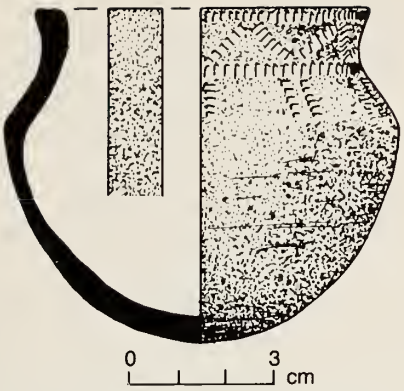

Fig. 17 Clay pot, no. 2, Hungry Hall, Mound 1

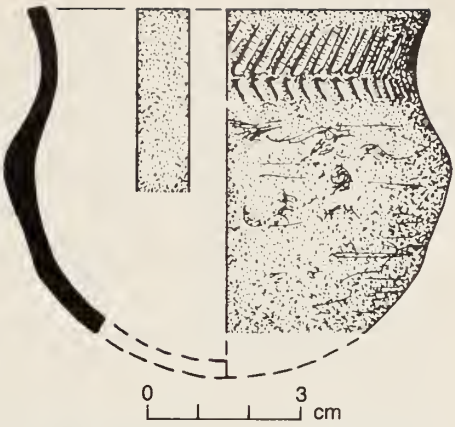

Fig. 18 Clay pot, no. 14, Hungry Hall, Mound 1

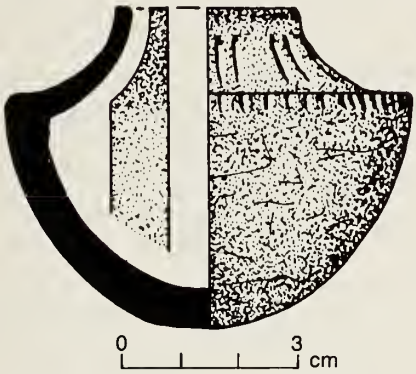

Fig. 19 Clay pot, no. 33, Hungry Hall, Mound 1

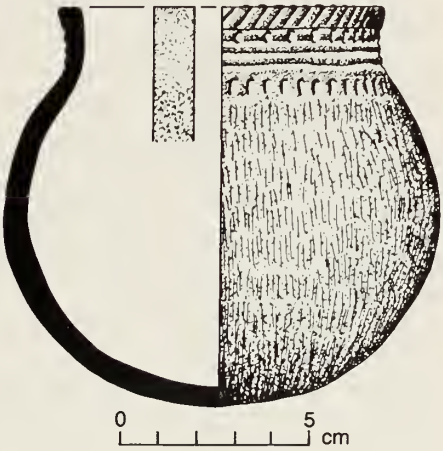

Fig. 20 Clay pot, no. 28, Hungry Hall, Mound 1

3 bird-bone beads
1 duck bill

The complete pot (Pl. 51B and 52B) is an undecorated, crudely fashioned pinch-pot 5 cm high and some 7.4 cm in diameter, with a capacity of 110 ml.

The partial pots, identified by their field catalogue numbers, have the following characteristics.

Vessel no. HM–1–2 was probably about 7.1 cm high and is 8 cm in diameter. Decoration (Fig. 17), on the lip as well as on the exterior surface, consists entirely of lines of small oval punctations. Inside the vessel was an unmodified *Unio* shell.

Vessel no. HM–1–14 (Fig. 18) was probably about 7.4 cm high and is 8.9 cm in diameter. Decoration on the lip and rim is a fine cording, below which is a horizontal line of oval punctations.

Vessel no. HM–1–33 (Fig. 19) is 5.4 cm high and 7.0 cm in diameter. Decoration consists of both cording and punctation.

The final vessel in this group, no. HM–1–37, is also the largest, being 8.3 cm high and 9.7 cm in diameter. Decoration is identical with that on vessel no. 14 above.

The antler object is too fragmentary to yield any data beyond the fact that it is 2 mm thick and is pierced by a hole 5 mm in diameter.

Of the three bird-bone beads, one is too badly broken up to yield any metrical data; the others (Pl. 50C, D) are each 7.4 cm long and about 1.6 cm in diameter.

The duck bill was probably an amulet and appeared to be buried with the body of an infant.

With burial 18 (Pl. 46) was a clay vessel (Pl. 51C and 58A) 10.7 cm high and 11.5 cm in diameter, with a capacity of 600 ml. Decoration (Fig. 20) is cord and punctate on a well-made vessel with a vertically corded body.

Inside the vessel was an unmodified *Unio* shell that was probably intended for use as a spoon. If this supposition is correct, then the pot itself was not a grave offering but merely a container for the grave offering, which was food for the spirit of the deceased.

Beside the pot was a bifacially worked, heavy schist blade or chopper (Pl. 57E) 12 cm long, 8.1 cm wide, and 1.7 cm thick.

Within the central burial pit, but not at the bottom, were found one complete clay vessel and parts of another broken specimen. Pieces of the latter were also found in the southwest cluster. Having no clue as to its original resting place, we have included it here as a matter of convenience only. The specimen (Fig. 21) was about 12.6 cm high and 18.0 cm in diameter. Apart from the cording on the lip and the two horizontal lines of cording on the rim, decoration consists of lines of long, shallow punctations.

The other vessel in this category was found in a gap in the birchbark lining of the pit. It could therefore have been placed originally in the pit itself or on the outside of the birchbark lining, that is, in the southwest cluster. It, too, is included here simply as a matter of convenience.

The pot itself (Pl. 59) is 9.8 cm high and 12.5 cm in diameter and has a capacity of 580 ml. Apart from a band of faint cording on the rim, decoration

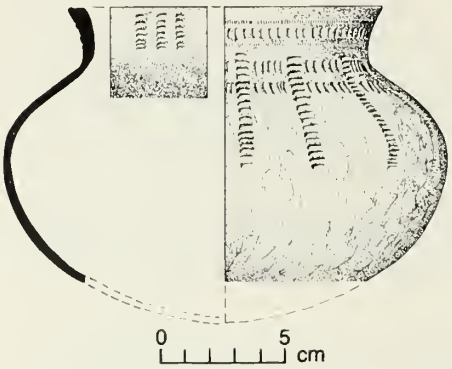

Fig. 21 Clay pot, no. 35, Hungry Hall, Mound 1

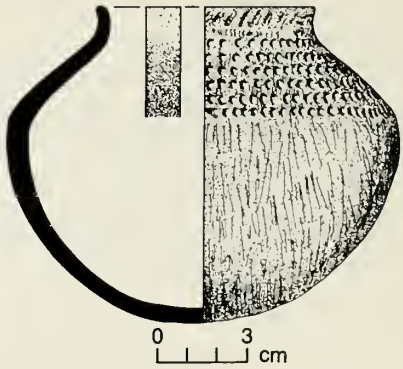

Fig. 22 Clay pot, no. 32, Hungry Hall, Mound 1

(Fig. 22) consists of six horizontal lines of small punctations. The body of the vessel is marked with vertical cording.

An unusual feature of this pot is the presence of a birchbark lid (Pl. 60), the only one I have seen in Ontario.

Scattered at random across the irregular floor of the burial pit was a rich assortment of grave furniture. The following items were present:

11 clay pots
parts of two other pots
3 shell gorgets
1 copper bead
1 lump of powdered haematite
1 agate side scraper
4 columella shell beads
1 olive shell bead
37 *Natica* shell beads

To avoid confusion, the pots will again be identified by their field numbers.

Pot no. HM–1–1 (Pl. 61) is 9.3 cm high and 11.5 cm in diameter and has a capacity of 510 ml. Decoration is present on the lip as well as on the exterior (Fig. 23) and consists entirely of punctations. The body of the vessel is vertically corded.

Pot no. HM–1–17 (Pl. 62A) is 7.6 cm high and 9.0 cm in diameter and has a capacity of 266 ml. Decoration on both the lip and exterior is cording (Fig. 24).

Pot no. HM–1–18 (Pl. 62C) is 6.6 cm high and 8.4 cm in diameter and has a capacity of 165 ml. Decoration is illustrated in Figure 25. Inside the pot were the proximal, middle, and distal phalanges of the three middle toes of a calcined human foot.

Pot no. HM–1–19 (Pl. 62B) is 7.2 cm high and 8.5 cm in diameter and has a capacity of 187 ml. Decoration (Fig. 26) includes both cording and punctation.

Pot no. HM–1–20 (Pl. 52C) is 5.0 cm high and 6.3 cm in diameter and has a capacity of 76 ml. This is the smallest pot from this mound. Decoration (Fig. 27) includes both cording and punctation.

Pot no. HM–1–21 (Pl. 55B) is 7.0 cm high and 9.2 cm in diameter and has a capacity of 240 ml. Decoration is illustrated in Figure 28. The body is vertically corded.

Pot no. HM–1–22 (Pl. 63) is 8.8 cm high and 11.1 cm in diameter and has a capacity of 550 ml. Decoration is illustrated in Figure 29.

Pot no. HM–1–23 (Pl. 58B) is the largest vessel from the site. It is 10.5 cm high and 14.6 cm in diameter and has a capacity of 1000 ml. Decoration on the vertically corded vessel is illustrated in Figure 30.

Pot no. HM–1–24 (Pl. 55A) is 5.2 cm high and 7.6 cm in diameter and has a capacity of 140 ml. Decoration (Fig. 31) is by linear punctate.

Pot no. HM–1–25 (Pl. 55D) is 7.4 cm high and 9.9 cm in diameter and has a capacity of 260 ml. Decoration (Fig. 32) includes both cording and punctation.

The final vessel in this series is pot no. HM–1–26 (Pl. 53A). It is 8.6 cm high and 10.5 cm in diameter and has a capacity of 360 ml. Decoration is illustrated in Figure 33.

Each of the partial vessels that were found on the floor of the pit is represented only by a few rim-sherds. One of them (no. HM–1–34) is a typical

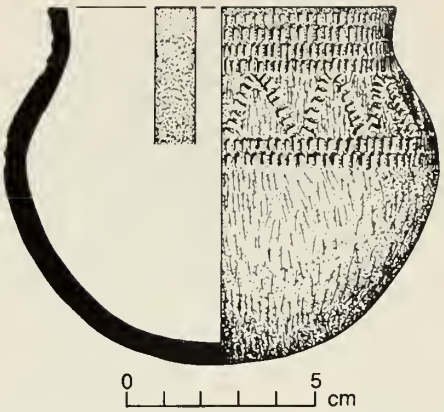

Fig. 23 Clay pot, no. 1, Hungry Hall, Mound 1

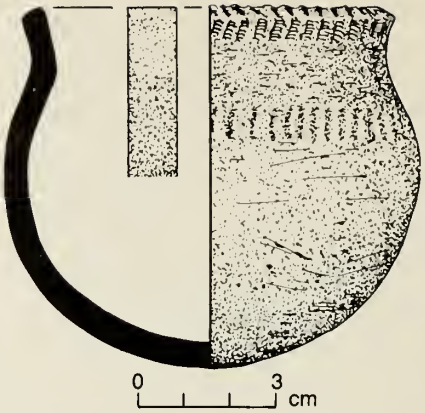

Fig. 24 Clay pot, no. 17, Hungry Hall, Mound 1

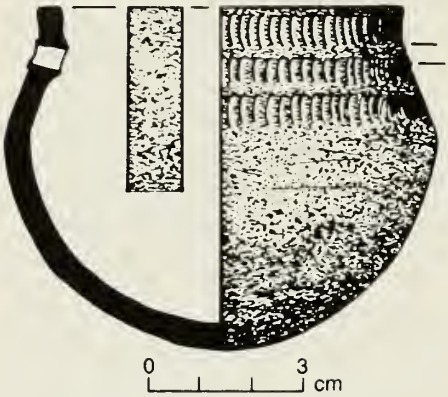

Fig. 25 Clay pot, no. 18, Hungry Hall, Mound 1

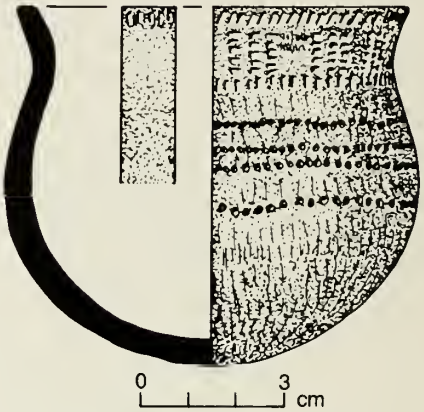

Fig. 26 Clay pot, no. 19, Hungry Hall, Mound 1

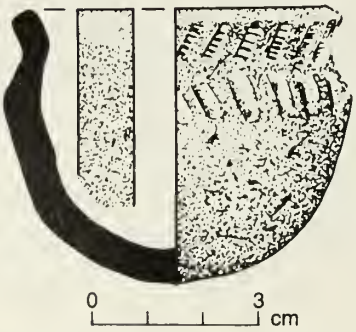

Fig. 27 Clay pot, no. 20, Hungry Hall, Mound 1

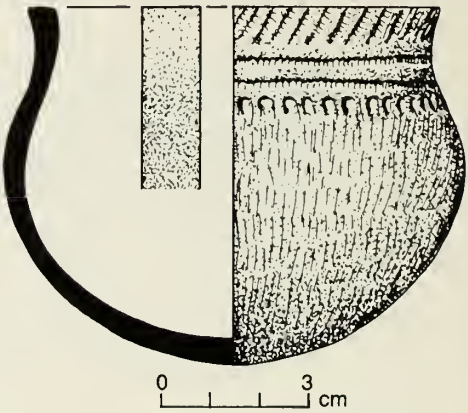

Fig. 28 Clay pot, no. 21, Hungry Hall, Mound 1

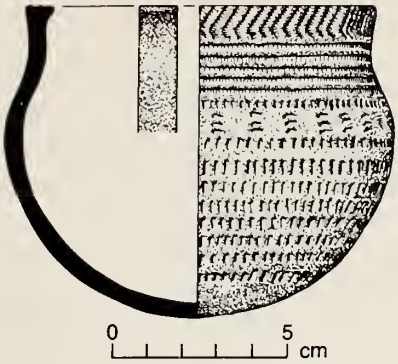

Fig. 29 Clay pot, no. 22, Hungry Hall, Mound 1

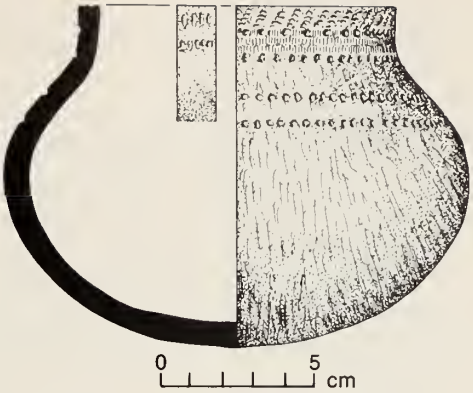

Fig. 30 Clay pot, no. 23, Hungry Hall, Mound 1

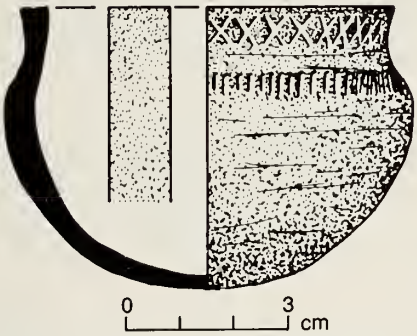

Fig. 31 Clay pot, no. 24, Hungry Hall, Mound 1

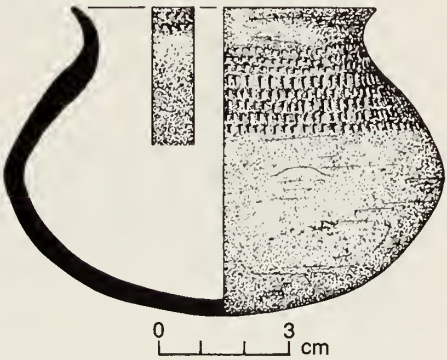

Fig. 32 Clay pot, no. 25, Hungry Hall, Mound 1

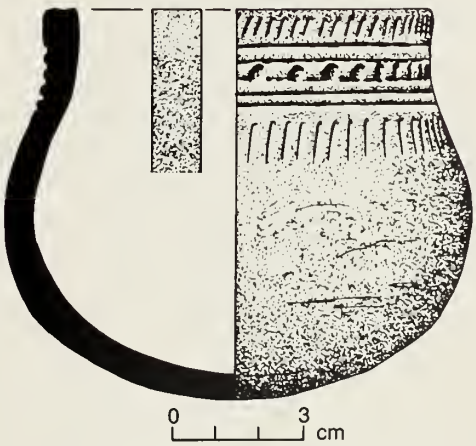

Fig. 33 Clay pot, no. 26, Hungry Hall, Mound 1

Blackduck vessel with a plain body and an oral diameter of about 7.7 cm; the other, a Blackduck vessel with a vertically corded body, had an oral diameter of about 8.8 cm.

The gorgets (Pl. 64) were probably all fashioned from *Unio* shells, although the diagnostic features required for a positive identification were removed during the manufacturing process. They range in height from 7.5 cm to 8.6 cm and in width from 9.0 cm to 9.5 cm. The diameters of the suspension holes are 2 mm to 4 mm.

The copper bead (no. HM–1–43) has an overlapping joint and was made by rolling up a thin rectangular sheet of native copper. One end of the specimen has been eroded away; the remaining portion is 3.4 cm long and 5 mm in diameter.

The lump of powdered haematite, about the size of a large walnut, had apparently been wrapped up when it was placed in the grave, although all traces of the wrapping have vanished.

The agate side scraper (Pl. 49C) is 3.6 cm long, 1.5 cm wide, and 3 mm thick. Fashioned from a flake, it is unilaterally chipped along both edges.

The four beads that were fashioned from the columellae of conch shells (Pl. 65B, C, D, E) range in length from 3.5 cm to 4.7 cm and in diameter from 0.9 cm to 1.6 cm. They were drilled longitudinally for suspension with holes that are 3 mm to 4 mm in diameter.

The final member of this group is a cluster of thirty-eight shells—one olive shell and thirty-seven *Natica* shells (Pl. 65A). From their distribution on the floor of the burial pit, it is very likely that they were sewn to the surface of some object, possibly a bag, which has long since disappeared. For attachment, a facet was ground on the side of each shell, exposing the cavity, so that the specimen could be threaded.

This completes our description of Mound 1 at Hungry Hall, together with the burials and the grave furniture that it contained. There are, however, some additional observations that might profitably be made at this time. For example, we found three antler picks at Hungry Hall (Pl. 66). From the marks that were found on the edges of the pits under the two mounds at the site, as well as from the presence of the picks themselves in the mound fill, we can be reasonably sure that these were digging tools.

The presence of red ochre or powdered haematite was also much more widespread than my previous observations would indicate. Large amounts of this material were scattered across the floor of the burial pit, and many of the bones, both there and throughout the mound, had been stained by the ochre. It is evident that red ochre, like fire, played a prominent part in the mortuary ceremonies of the people who built the mounds.

Certainly the most striking feature of such ceremonies was the presence of clay masks that had been built up on several of the skulls and the removal of the brains of many individuals immediately after death. The latter was accomplished by making a circular hole in the back of the head—see, for example, Plate 44. In the next section, dealing with the second mound at the Hungry Hall site, these practices will be described more fully.

As a final comment on this mound, we may indicate the presence of a flint projectile point embedded in the body of a first lumbar vertebra (Pl. 67).

Hungry Hall, Mound 2

Mound 2, 229 feet (69.8 m) upstream from Mound 1, was a low, oval structure 63 feet (19.2 m) in diameter and 2½ feet (0.76 m) high. As with Mound 1, a large part of the structure had been eroded away by recurring spring floods, and the remaining portions were pockmarked by the spoor of curio-hunters. After the mound had been mapped and gridded, the eroded edge was cleaned up and cut back to give us a vertical profile. This, we hoped, would offer some clues to the internal structure of the mound. We discovered during the process that the old sod-line was intact, that it covered a brown clay subsoil, and that the mound fill was an artifact-bearing humus dotted with lumps and lenses of sterile brown clay (Pl. 68).

Next, we excavated a 5-foot (1.5 m) trench through the centre of the mound at right angles to the river bank. Near the base of the mound we encountered logs in varying stages of decay. These formed a relatively solid layer of wood from the river bank to 25 feet (7.6 m) east. Such individual logs as could be identified and measured are illustrated in Figure 34. Their orientation was roughly parallel to the river, and some of them had been charred *in situ* near the eastern edge of the mound. When the log floor had been mapped and

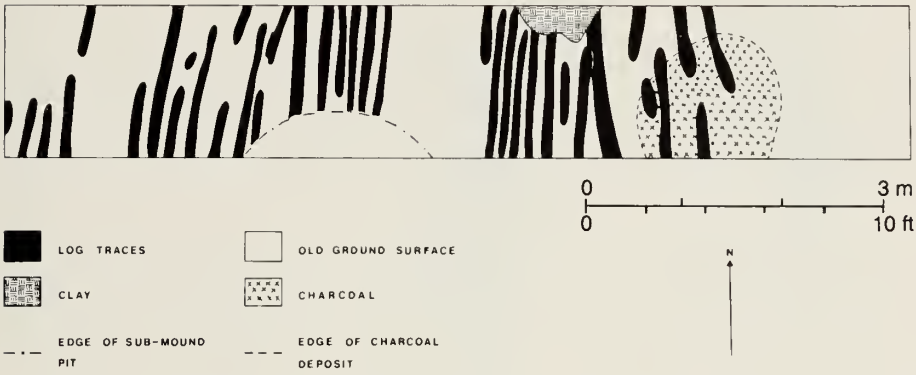

Fig. 34 Floor plan of east-west trench through centre of Mound 2, Hungry Hall, showing logs at base of mound

photographed, we excavated the trench to subsoil. During the process, we encountered the edge of a submound pit near the southern wall of the trench. In order to find out how deep it was, the exposed portion of the pit was partially excavated. We were not able to excavate it completely, however, because there was not sufficient room in which to work. As it was too late in the season to open new areas of the mound, the north and south walls of the trench were graphed (Fig. 35 and 36), and the trench was refilled.

When we returned to the site the following summer, we opened a series of squares in the centre of the mound, taking them down to subsoil. The outline of the pit was then visible as a circle 8 feet (2.4 m) in diameter. When we had excavated the pit to a depth of almost 6 feet (1.8 m), a thin stratum of disarticulated human bones was encountered.

Fig. 35 Profile of north wall of east-west trench through centre of Mound 2, Hungry Hall

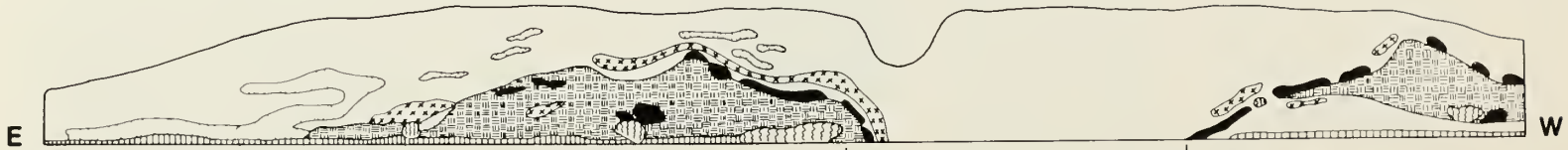

Fig. 36 Profile of south wall of east-west trench through centre of Mound 2, Hungry Hall

While we were excavating the pit, we noted that the logs mentioned earlier did not cross the pit but had been bent down into it. Some of the logs were traced to within a few centimetres of the bone stratum, although none of them was in actual contact with the bones themselves. Clearly, the burial pit had not been refilled after the funeral; it had merely been covered over with logs, then capped with a mound of earth. As the logs decayed over the years, the whole structure slowly settled into the cavity. We noted, too, that the pit had been dug with pointed instruments—probably pointed sticks as well as the antler picks (Pl. 66) that were found at the site—as the vertical marks of such instruments were clearly visible on the edges of the hole. Also noted were small rivulets down one side of the pit. There, rain water had washed the finer clays out of the side of the pit, depositing them like a small talus slope on top of the stratum of bone. The distribution of rivulets on the side of the pit and the amount of fine clay which they washed down suggest that there was a light rain accompanied by a southwest wind during the burial ceremony.

The sequence of events, then, was as follows: first, a vertical-sided, circular pit 8 feet (2.4 m) in diameter, with a flat bottom, was dug about 7 feet (2.1 m) into the level ground beside the north bank of the Rainy River. Some of the clay dug out of the hole was thrown up in a ring around the excavation, although much of it must have been carried away; a number of disarticulated skeletons were then placed on the floor of the pit. After the bones were in place, and after the gentle rain mentioned earlier, the pit was roofed over with spruce or tamarack poles up to $7\frac{1}{2}$ inches (19 cm) in diameter; a fire was then built near the edge of the log roofing, charring some of the logs *in situ*; and finally, the structure was capped by a mound of earth. A charcoal sample taken from one of the logs that had been charred *in situ* yielded a radiocarbon date of A.D. 1190 ± 60 (S–109); that is, the funeral took place almost 900 years ago.

When we exposed the layer of disarticulated bones on the bottom of the pit, we found that the crania were in two clusters, one near the northern edge of the pit floor, the other near the southern edge (Pl. 70). The other skeletal elements were randomly scattered across the floor. In the north cluster (Pl. 71) we found immediate evidence of the "masking" mentioned in our description of Mound 1. Here, however, the practice was greatly elaborated. Both orbits and the nasal cavity were packed with fine grey clay; discoidal shell beads were pressed into the wet clay in each eye-socket to simulate pupils; something (probably a wooden "nose" with a thin, vertical tenon on the back) was pressed into the wet clay in the nasal cavity; and finally, the entire skull was lightly dusted with red ochre. When the skull was ultimately lifted from the floor of the pit, it was found that a circular hole some 6 cm in diameter had been opened into the back of the head (Pl. 72). From the nature of the fractures it is apparent that the skull was opened, probably to remove the brain, at or shortly after the death of the individual.

On the west side of the individual mentioned above was another masked skull with an occipital opening. And below there was a third specimen, also masked, resting on and among the scattering of bones that covered the bottom of the pit (Pl. 73).

The south cluster contained four complete skulls, all masked, and portions of a fifth specimen which was unmasked. One of the masked skulls had bits of

clay adhering to the frontal bone (Pl. 74) as well as to its left side and behind the zygomatic process (Pl. 75). It also had a large hole in the occipital region.

When the masked skulls are viewed as a group, it is obvious that the masking on at least some of the specimens was originally much more extensive than it is at present. Most of them, for example, have bits of clay adhering to their surfaces. Their distribution would suggest that at one time the tops and sides of the skulls were completely covered with clay and that the frontal area was similarly covered to the upper edges of the orbits. In addition, there is a distinct possibility that when the mandible was present, as it was with five of the seven masked skulls, it was firmly attached to the skull with clay. This feature is still present on one of the skulls, and there are traces of it on three others.

Apart from the seven individuals represented by the masked skulls, the burial pit contained all or parts of the remains of two adults and eleven subadults, a total of twenty people. The subadults ranged in age from a newborn infant to a fourteen-year-old. Masking was not found on any of the subadult skulls, but the skulls of the two oldest children, aged twelve and fourteen years, each had a circular hole in the occipital region, and almost all of them exhibited the scratches and cut-marks that resulted from their having been dismembered. One of the remaining adults was represented only by his mandible, which was lying on the floor of the pit near the western wall. The ninth and final adult, represented mainly by the frontal bone, the right temporal, and the mandible, was found in the southern cluster. He died in his early twenties. Some time prior to his death the young man had been scalped. However, he had survived both the scalping and the subsequent infection for at least a few weeks, as new bone had been deposited along the front and the edges of the mutilated area (Pl. 76).

The nine adults in the sample ranged in age from the mid-twenties to early or mid-thirties, and they were all males.

Grave furniture consisted of the following items:

4 small clay pots
4 olive shell beads
12 bird-bone beads
2 catlinite sucking-tubes
1 bird-bone awl

These specimens were almost all in the northern half of the burial pit, and on or very near the bottom. Two of the pots and a few of the beads were fairly close to the northern edge of the floor and may have been associated with a small cluster of subadult bones located there, immediately west of the north cluster of adult crania. Any such association, however, was probably fortuitous. They were certainly not associated with any particular individual, for the bones of the various individuals were scattered and intermingled.

Mound 2, like Mound 1, was built by the people who left traces of their Blackduck culture so widely scattered throughout the Rainy River area. None of the four clay pots that were found on the floor of the burial pit, however, has a trace of the cording that is characteristic of Blackduck ceramics. They are decorated entirely by punctations.

Pot no. 961.236.142 is 6.8 cm high and 8.1 cm wide (Fig. 37A).

Pot no. 961.236.143 is 6.0 cm high and 7.0 cm wide (Fig. 37B).

Pot no. 961.236.102 is 5.7 cm high and 7.2 cm wide (Fig. 37C and Pl. 77A). Its capacity is 110 ml.

The final and smallest pot in this series (no. 961.236.101) is 4.8 cm high and 5.2 cm wide (Fig. 37D and Pl. 77B). Its capacity is 47 ml.

The four olive shell beads (Pl. 78A) all have their apices ground off for stringing.

The twelve bird-bone beads (Pl. 78C) fall neatly into two classes: eight of them are about 5.5 cm long; the other four are about 3.0 cm long. Diameters range from 8 mm to 11 mm.

The longer of the two catlinite sucking-tubes (Pl. 57D) is 18.3 cm long and 1.5 cm in diameter at the smaller or broken end. It is surprisingly well made; the hole is perfectly centred and is 1 cm in diameter. Four faint shallow notches divide the expanded end of the specimen into four equal arcs.

The smaller of the two sucking-tubes (Pl. 57C) is only 2.3 cm long but it, too, is very carefully fashioned. Its diameter tapers from 1.5 cm to 1.1 cm, with the walls no more than 2 mm thick.

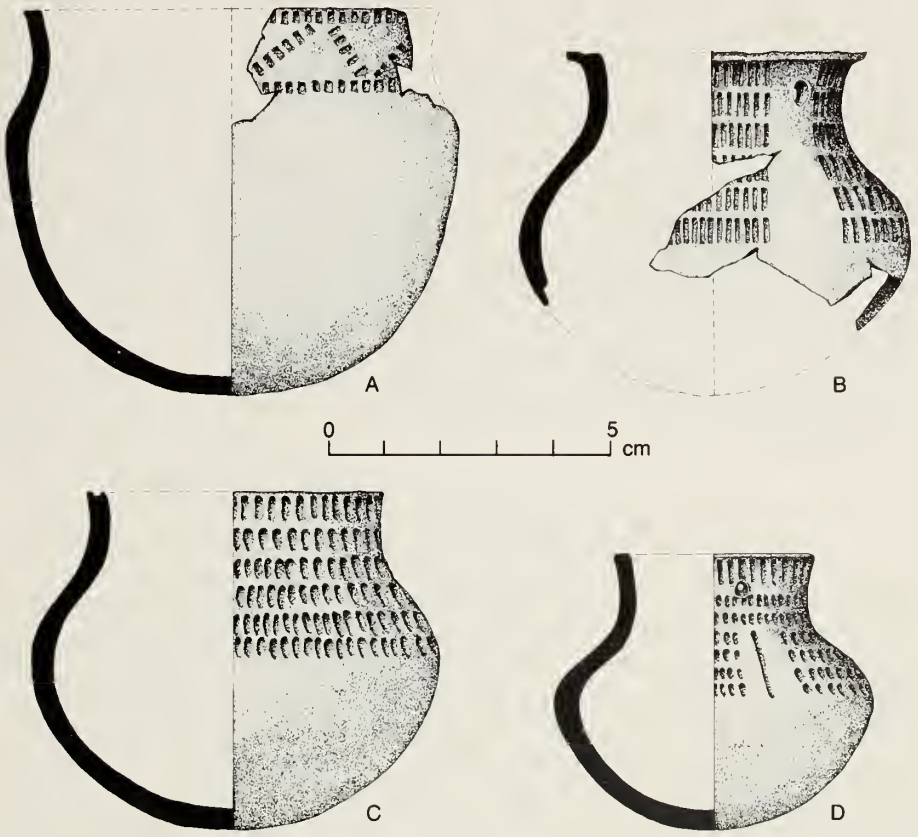

Fig. 37 Clay pots, Hungry Hall, Mound 2.
A, 961.236.142; B, 961.236.143; C, 961.236.102; D, 961.236.101

Although the final item, the bird-bone awl (Pl. 78B), is included here as an item of grave furniture, there is some doubt as to its provenience. It was found at the upper level of the scattering of bone that lined the bottom of the burial pit. It might have been placed there intentionally; but it might also, and with equal probability, have fallen into the grave with the mound fill when the log covering collapsed.

It is, in any event, a beautifully finished and highly polished specimen, tapering gradually to a needle-sharp point. It is 12.1 cm long and 1.0 cm wide at the base.

Mound Point

A few miles east of the Hungry Hall site are the remains of another Blackduck mound. They are situated on the bank of the river in the southwest quarter of Section 51, Atwood Township, Rainy River District. When I first visited the site, nothing remained but the base of the mound. Residents of the area told me that it had been levelled "many years ago", when a garden was being prepared for planting. The remaining traces of the structure suggested that it had originally been roughly circular, with a diameter of about 37 feet (11.3 m). Approximately one-third of the mound base had been washed away by the river. In the process, a submound pit had been exposed, but it too had been eroded away. The remaining traces of the pit indicated that it was probably no more than 2 feet (0.6 m) deep; no reasonable estimate could be made as to its diameter. Apart from a few scattered bones, the only human remains that were recovered consisted of one complete skeleton and large parts of another. The complete skeleton, that of a robust, mature male, had been seated on the northern edge of the floor of the pit with his knees drawn up under his chin. The other individual, probably a secondary burial, was lying on the floor of the pit.

The only grave furniture was an isolated fire-making kit—a lump of iron pyrite and a large, battered chunk of flint.

The Armstrong Mound

The Armstrong Mound is one of at least eleven mounds scattered along the Ontario side of the Long Sault Rapids on Rainy River (Fig. 38) about 32 miles (51.5 km) west of Fort Frances. The entire site is about $1\frac{1}{2}$ miles (2.4 km) long and is located on "Plan SM–74, being a subdivision of Long Sault Indian Reserves Nos. 12 and 13, Chapple Township, Rainy River District, Ontario". Mound 7, the Armstrong Mound, is located on Lot 30. It sits on the edge of an old terrace, 275 feet (83.8 m) back from the river, at an elevation of 26 feet (7.9 m) above the water. The mound was almost perfectly circular, with a north-south diameter of 63 feet (19.2 m) and an east-west diameter of 67 feet (20.4 m). It was 6 feet (1.8 m) high and contained about 756 cubic yards (578 m^3) of earth (Pl. 79).

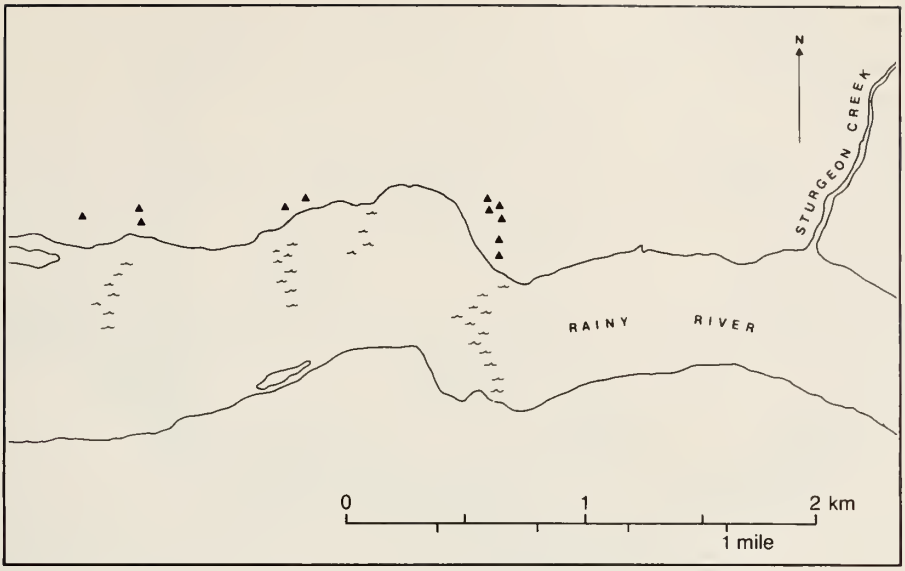

Fig. 38 Distribution of burial mounds, Long Sault Rapids, Rainy River

Because the excavation of the Armstrong Mound has already been reported in considerable detail (Kenyon 1970), only the salient features will be mentioned here. Unlike the Hungry Hall mounds and the one at Mound Point, this mound was not built of humus that had been scraped up from the surface of a village area; it was built of heavy clay with an almost total absence of ash and charcoal and with an extremely low artifact content. All of the artifacts were Laurel, in contrast with those from the other mounds, which were mainly Blackduck with only a thin admixture of Laurel material. While we were excavating the mound, I thought that the mottled appearance of all the sections was the result of basket-loading. That is, I thought that each unit or mottle represented an individual basketload of fill. This view, incidentally, was reinforced by the fact that the remains of several discarded birchbark baskets were found scattered throughout the mound fill. On reflection, however, I believe that the mound was constructed of sods. Many of the sods, of course, would still have been carried to the construction site in baskets.

At the base of the mound was a rude rectangle of logs (Fig. 39), which was found to contain three separate burials. Although the purpose of the logs is not immediately evident, they are probably the remnants of a cribbing or scaffolding. Whatever the structure may have been, it collapsed or was dismantled before the mound was built, because the logs were lying directly upon the old ground surface. The ends of several of the logs were both charred and pointed, indicating that the trees had been felled by building fires at their bases, then chipping away the charcoal with an adze or some similar tool. The logs themselves were white pine (*Pinus strobus*). When a charcoal sample from the end of one of the logs was submitted to Isotopes, Inc. for radiocarbon dating, it yielded a date of 1,010 ± 100 years, or A.D. 957.

Burial 1, a multiple secondary burial, contained the disarticulated skeletons of six people—four adults and two children. The bones were thoroughly

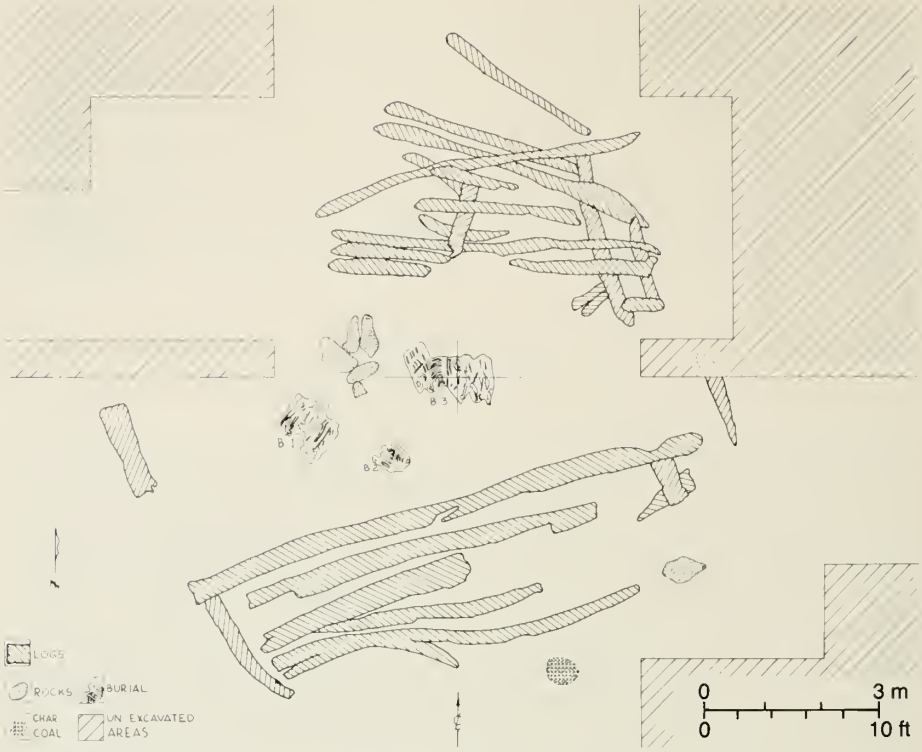

Fig. 39 Floor plan at subsoil, Armstrong Mound, Rainy River

mixed together and liberally sprinkled with powdered haematite.

Burial 2 was that of a child about five years old, tightly flexed, lying on its left side, and heading northeast.

Burial 3, like burial 1, was a multiple secondary burial containing the disarticulated skeletons of six people—in this instance, three adults, one youth aged fourteen to sixteen, and two children aged about five and six. In contrast with burial 1, however, the skeletons of the three adults and the youth were placed in the grave in separate bundles.

Although no grave furniture was present, there were two specimens from the mound fill that are pertinent to the present discussion. One is a monitor pipe (Pl. 80), which appears to have been fashioned from Ohio pipestone. It is 11.4 cm long, with an oval base 3.4 cm wide. The specimen is 4.5 cm high. The other specimen is a sucking-tube (Pl. 81 and Fig. 40) fashioned from a soft pink rock composed of orthoclase and quartzite. It is 9.7 cm long and has a maximum diameter—excluding the pair of frogs carved in low relief on opposite sides of the tube—of 5.6 cm.

The Pithers Point Mound

Pithers Point, at the eastern edge of the town of Fort Frances, was named after an Indian agent who lived there in the late 1800s. At the south end of the point, where it juts out into Rainy River, are the remains of a mound which

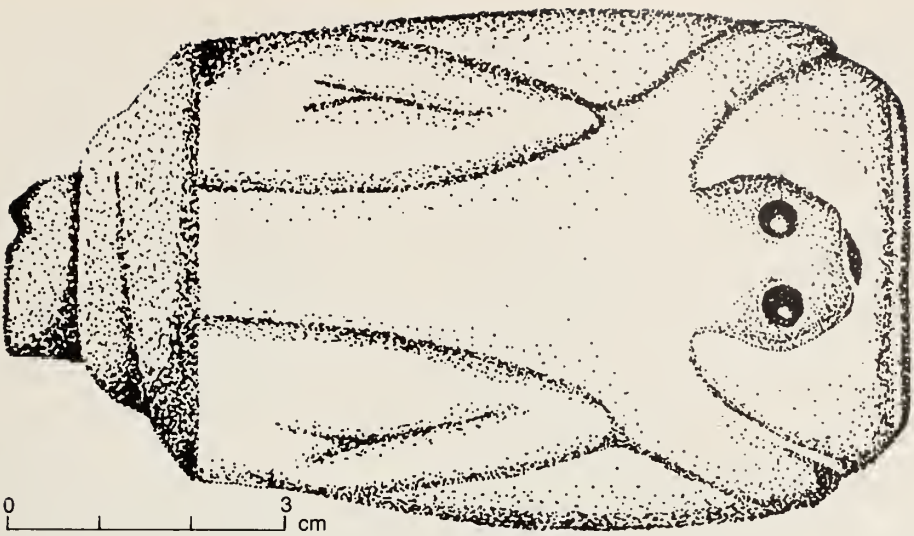

Fig. 40 Stone sucking tube, no. 199, Armstrong Mound, Rainy River

Pithers is supposed to have dug into sometime prior to 1884 (Bryce 1885:3). According to Bryce, the mound contained "a structure of logs some 10 feet square, and from six to eight feet high". Bryce noted, also, that the logs were charred. Nothing else, apparently, was recorded. Persistent stories around Fort Frances, however, still tell of the discovery of human skeletons in the mound. It is said, too, that Pithers built a root-cellar in the centre of the mound. In all probability, his excavation was made for that purpose.

When I first visited the site in 1957, all that remained was an irregular mass about 25 feet (7.6 m) in diameter and 4 feet (1.2 m) high. Excavation failed to reveal any architectural features or burials, although we did find traces of Pithers's root-cellar. It was a log structure, fastened with iron spikes.

The Oak Point Island Mound

Oak Point Island is a low, irregular mass lying near the eastern end of Rainy Lake. Its southern tip—a rocky point—is covered with a fairly dense stand of burr oak. Near the centre of the small point is a mound about 40 feet (12.2 m) in diameter and 3 feet 10 inches (1.2 m) high.

When I first visited the site, the mound was a soft, spongy mass, riddled with ground-hog burrows and liberally dotted with small oaks of diameters up to 10 inches (25.4 cm). It was also dotted with small potholes. The earth dug out of the mound by the resident ground-hogs was a dark, ashy loam that had obviously been collected from a campsite, as it contained broken bits of Blackduck pottery, pieces of flint, and food refuse in the form of animal, bird, and fish bones. Surface indications, then, suggested a Blackduck mound like those at Hungry Hall.

When we actually excavated the mound, however, a totally different picture emerged. Initially, I identified the scattered bits of human bone that

we encountered as disturbed intrusive burials; that is, I assumed that the mound had been built over a submound pit and that the scattered bones I was finding had been buried in the mound at some later date. It soon became evident, however, that there *was* no submound pit. Nor was there a central burial such as was found at the old ground level beneath the Armstrong Mound on Rainy River. In fact, there was no focal point within the entire mound—nothing whatever that could be called "central" in either a structured or a ceremonial sense. There was just an amorphous mass of earth with a surprisingly low artifact content, a number of large angular rocks (Pl. 82), two burials, a number of scattered bones, and a rich assortment of grave furniture. Although the artifact content of the mound fill was surprisingly low, there were sufficient rim-sherds to identify the mound as Blackduck.

One of the burials, in the southeast quadrant, was that of a mature female. She was lying on her back with her knees slightly flexed, heading southwest. No grave furniture was present.

The other burial, in the northeast quadrant, was that of an eight- or nine-year-old child. It was comfortably flexed, lying on its right side, and heading northeast. At the back of the child's head was a copper kettle (Pl. 83), complete with bail or handle. It is 17 cm in diameter and 8 cm high and was fashioned by the battery method. The upper edge of the vessel is rolled outwards around an iron stiffening ring. The lugs are approximately 5 cm high and taper from 3 cm wide at the top to 2 cm wide at the bottom. The upper corners of the lugs are folded outwards. Each lug is attached by a single rivet inserted from the inside, with a head 1 cm in diameter. The holes for attaching the bail are quite irregular in outline and appear to have been cut out rather than punched.

In front of the child's chest was a small cluster of artifacts contained in what had once been a beaded pouch. Although the pouch itself had long since disintegrated, several lines of glass beads attested to its presence. In all, there were sixty-five beads—nine black and fifty-six white. Inside the pouch were a strike-a-lite (Pl. 84F), a piece of flint, an unmodified *Unio* shell, and a jack-knife that was too badly rusted to yield any reliable data.

Around the neck of the child was a string(?) of three blue glass beads (Pl. 85E), each about 8 mm long and 9 mm in diameter. Each bead is encircled by an overlay in the form of a plant made from a filament of white glass fused to the bead by subsequent reheating.

None of the remaining grave furniture could be associated with any of the human skeletal materials that were encountered. In fact, the amount of grave furniture was surprisingly large in view of the fact that, apart from the two burials already mentioned, the mound contained the scattered remains of only six people. Because the grave furniture could not be associated with the skeletal remains, except in the one instance mentioned earlier, there was actually no way that I could distinguish clearly between grave furniture and fortuitous inclusions in the mound fill. Some of the larger items, such as copper kettles, presented no problems; nor did clusters of objects that were obviously associated. For example, a cluster in the southwest quadrant included a copper kettle (no. 23), an iron hide-scraper, the end of a triangular file, an iron axe, and a strike-a-lite. The other major cluster, in the southeast quadrant, consisted of twelve conical copper bangles, which had probably

been suspended from an article of clothing when they were placed in the mound. The remaining items were simply scattered throughout the mound. Smaller, isolated artifacts, however, may actually have been fortuitous inclusions, even though they are listed here as grave furniture.

The remaining grave furniture, then, consists of the following items:

3	copper kettles	14	copper bangles
2	wooden spoons	2	mirrors
4	pieces of meat	1	copper spring
300	ml of pemmican	1	ramrod guide
1	sucking-tube	1	gun-flint
1	hide-scraper	3	iron knives
1	file fragment	1	iron awl
1	iron hoe	1	pair of scissors
1	iron axe	1	medicine bag
3	strike-a-lites	2	spiral copper beads
2	latten buttons	1	silver jewellery fragment
2	pewter ornaments	1	copper awl
3	finger rings	1	chalcedony blade
1	copper bracelet	17	small clay pots
13	brass thimbles	3599	glass beads

The smallest of the three copper kettles (no. 23) is 14 cm in diameter and 5 cm high (Pl.86). It is very similar to the copper kettle that was buried with the child mentioned earlier. It differs, however, in that the lugs are rectangular, measuring about 4.5 cm × 2.5 cm, and are each attached by two rivets; also, the holes for the attachment of the bail were punched from the inside and the upper corners of the lugs are unmodified. Because the specimen is very badly eroded, it is impossible to determine whether it was fashioned by the battery method or by some other process.

The middle-size copper kettle (no. 22) is an odd-shaped specimen 12.5 cm in diameter and 7.0 cm high (Pl. 87). It was fashioned by the battery method from surprisingly heavy-gauge metal. Again, the upper edge of the vessel is rolled outwards around the iron stiffening ring. Although no lugs were present when the vessel was placed in the mound, it had originally been fitted with them, for there are still faint lines showing where they had been hammered against the sides of the kettle to give them the proper contour. The lugs were 2.5 cm wide, and each was attached to the vessel with a single rivet.

The final and largest kettle in this series (no. 16) is a lidded vessel 18.5 cm high and 23.0 cm in diameter (Pl. 88 and 89). It is a well-made specimen, fashioned by the battery method from heavy-gauge copper and tinned on the inside. All fittings are of wrought iron, and both the lugs and the handle on the lid are attached to the vessel with heavy copper rivets inserted from the inside. The rivet heads have diameters of about 1.5 cm. The specimen is unusual, too, in that it is fitted with a handle projecting from the side of the lid. If it was turned over, the lid could be used as a frying-pan (Pl. 90). When it was found, the kettle was sitting upright in the ground with the lid in place. On removing the lid (Pl. 91), we found that it contained two wooden spoons, four slabs of meat, and some 300 ml of pemmican.

One of the two wooden spoons or ladles (no. 19) has a shallow oval bowl

that measures 7.5 cm × 9 cm (Pl. 92). The bifurcated handle rises at right angles to the bowl, and perched on top of the handle are two birds, each 3.5 cm high. The total length of the handle is 10 cm.

The shallow oval bowl of the other spoon (Pl. 93) measures 8.5 cm × 7.5 cm; its handle is 10 cm long, 1.8 cm wide, and 5 mm thick.

The four slabs of meat (see Pl. 94) are from the "brisket" area of a large mammal such as a bear or moose.

The sucking-tube (Pl. 84E) was whittled out of a block of steatite, and I judge that it is unfinished since all the similar specimens I have seen from the area are highly polished. The specimen is 4.0 cm long and has a maximum diameter of 2.1 cm.

Because both ends of the iron hide-scraper (Pl. 84B) are heavily eroded, the original length of this specimen is uncertain. As it stands, it is 25.5 cm long. The handle is 17.5 cm long, 2 cm wide, and 4 mm thick.

The file fragment (Pl. 84H) is from a machine-made triangular tool; the surviving fragment is 9.7 cm long.

The iron hoe (Pl. 95A) was found very close to the surface of the mound, and it was also isolated. It is possible, therefore, that it should not be included with the mound material. As there is no way of avoiding this dilemma, I will arbitrarily include the specimen in the mound collection. It is a massive specimen, weighing 868.3 g. In spite of its weight it is only 18.8 cm long and 10.3 cm wide. It has an oval eye, which tapers from an outside breadth of 4 cm to an inside breadth of 3.5 cm.

The iron axe (Pl. 95B) is 13 cm long and weighs 145.5 g. In all probability the eye was originally round, but it is slightly distorted at present, having been used as a hammer at some point in its career.

The three strike-a-lites are all of the same oval type (Pl. 84F). Because they are all seriously eroded, their original dimensions remain in doubt; however, they probably measured some 3 cm × 7 cm.

One of the two latten buttons is a simple disc 2.1 cm in diameter, punched out of a sheet of metal no more than 1 mm thick. An iron ring, 5 mm in diameter, is soldered to the back of the specimen.

The other latten button (Pl. 85D) is a compound specimen having a front and a back section, both slightly convex, soldered together at the edge. It is 2.2 cm in diameter and has a total thickness of 7 mm. A small iron ring, 7 mm in diameter, is soldered to the back of the button.

When they were excavated, two items (Pl. 96A, C) were labelled as small silver buckles. Only when they were cleaned and examined was it noted that they were not silver but pewter, and that the crossbar was not a tongue but was integral with the ring itself. Both of them are rough, half-round castings with diameters of 1.1 cm and 1.9 cm. In all probability, they would have been sewn to a garment or strip of cloth in imitation of the more elegant and expensive silver buckles of the same shape.

One of the finger rings (Pl. 85A) is 1.8 cm in diameter and 3 mm thick. It was obviously cut from a brass thimble, as it exhibits a slight taper and has a knurled surface that is identical with that of the thimbles from the mound.

Another ring (Pl. 85B) is of cast copper, with an integral bezel set with a piece of pale-green cut glass about 8 mm in diameter.

The third and final ring was also of cast copper, but about a third of

it—including the bezel, if there was one—is missing.

The copper bracelet is fashioned from a two-strand copper wire with an "S" twist. Probably made for an eight- or ten-year-old child, the bracelet is simply a piece of thin wire 12 cm long, bent into shape (Pl. 84A).

Each of the thirteen brass thimbles has a small hole either punched or filed through its closed end (see Pl. 97). Several of them had the knotted end of a piece of rawhide against the inside of the hole, indicating that they had been used as bangles. They range from 1.6 cm to 2.0 cm in height and from 1.6 cm to 1.9 cm in diameter at the base.

Six of the fourteen copper bangles are illustrated in Pl. 96. They were made by rolling up odd-sized bits of copper that were probably salvaged from burnt-out copper kettles. They range in length from 1.3 cm to 2.7 cm.

Because each of the mirrors has three intact sides and one broken side, it is impossible to distinguish height from breadth. To simplify matters, therefore, I will arbitrarily refer to the distance between the parallel sides of each specimen as its height.

One of the mirrors (no. 59) is 11.3 cm high and 3.0 mm thick. It is of high-quality glass containing no visible bubbles.

The other specimen is 11.8 cm high and 4.0 mm thick. This, too, is made of high-quality glass, even though a few round air-bubbles are visible under 10-power magnification. When it was found, this mirror was mounted in a carefully stitched birchbank frame (Fig. 41).

The copper spring (no. 67) is 2.3 cm long and 1.2 cm in diameter.

The ramrod guide (Pl. 84C) is 3.1 cm long and 1.1 cm in diameter.

The gun-flint (no. 76), having been used repeatedly with a strike-a-lite, is much too battered to be identified with any assurance. It is a piece of

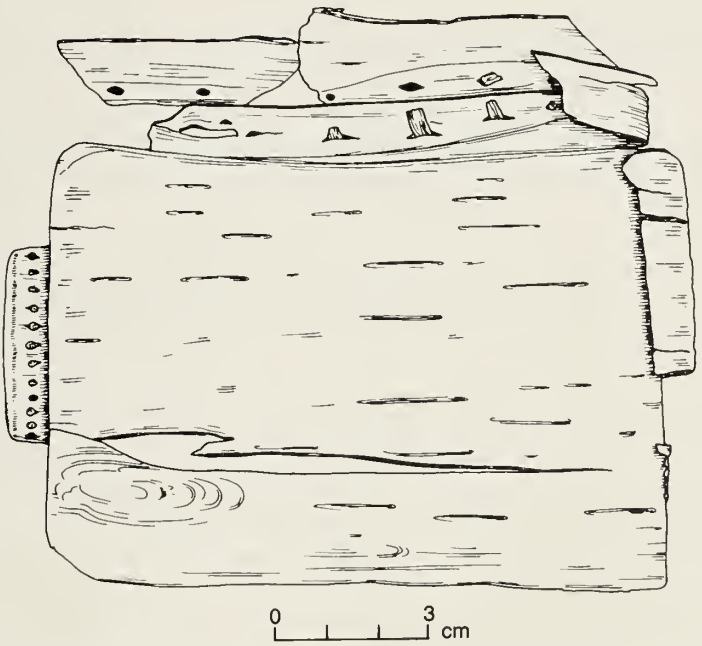

Fig. 41 Birchbark mirror frame, no. 78A, Oak Island Mound, Rainy Lake

honey-coloured flint that was almost certainly derived from a French gun-flint.

The three iron knives, the iron awl, and the pair of scissors were identified in the field by the presence of rust deposits only. No further data were recorded.

What I have identified as a medicine bag is no more than a small piece of skin folded around the foot of a large bird.

Only one of the spiral copper beads is intact (Pl. 96B); it is 1.5 cm long and 6 mm in diameter. The other specimen (no. 71) is of the same general type and probably of the same length. It is made of a finer-gauge wire, however, and has a diameter of only 5 mm.

The fragment of trade silver (Pl. 98) measures 1.9 cm by 2.8 cm. No marks are present.

Fashioned from native copper, the awl (Pl. 84G) is 7.6 cm long and 7 mm wide and has a maximum thickness of 3 mm.

The chalcedony blade (Pl. 84D) is a well-made oval specimen 5.0 cm long, 3.9 cm wide, and 8.0 mm thick.

All or parts of seventeen different miniature clay pots were unearthed during the excavation of the Oak Point Island Mound. These will be described in the order in which they were entered in the field catalogue. Again, apart from convenience, there is no significance to this order.

Pot no. 1 (Pl. 99 and Fig. 42A) is 5.6 cm high and 6.9 cm in diameter and has a capacity of 96 ml. Apart from the oval punctations on the interior and the shoulder, this is a miniature Blackduck vessel.

Pot no. 2 (Pl. 100 and Fig. 42B) is 3.6 cm high and 5.1 cm in diameter and has a capacity of 35 ml. This specimen is unusual in that it is pierced for suspension(?) The two suspension holes are on opposite sides of the neck of the vessel; they are both 2 mm in diameter and were punched through the wet clay from the outside. Another unusual characteristic of this vessel is the fact that its body is divided into quadrants by two narrow bands of punctations (Pl. 101).

Pot no. 3 (Pl. 102A) is 5.8 cm high and 6.8 cm in diameter. This specimen is obviously a pinch-pot, as were probably the rest of the pots in the series. The outer surface and lip of the vessel are stained a deep red with powdered haematite.

Pot no. 4 (Pl. 102B and Fig. 42C) is the smallest in this series. It is 4.2 cm high and 4.7 cm in diameter and has a capacity of only 32 ml. This specimen, too, was pierced for suspension by two 2-mm holes punched through the neck from the outside.

Pot no. 5 (Pl. 103A) is 4.8 cm high and 7.2 cm in diameter and has a capacity of 100 ml. It is decorated on the exterior by a line of faint thumbnail impressions immediately below the lip and by shallow, closely spaced incisions on the lip. Its suspension holes, which are improperly aligned, are 3 mm in diameter.

Pot no. 6 (Pl. 104C) probably had a diameter of slightly over 7.0 cm. The two horizontal lines of punctations were made with a circular hollow object about 2 mm in diameter, probably a reed or a small mammal bone. Before the application of the horizontal design, the vessel had been decorated with two horizontal bands of small, vertical linear stampings. These had been smoothed over, however, before the final decoration was applied.

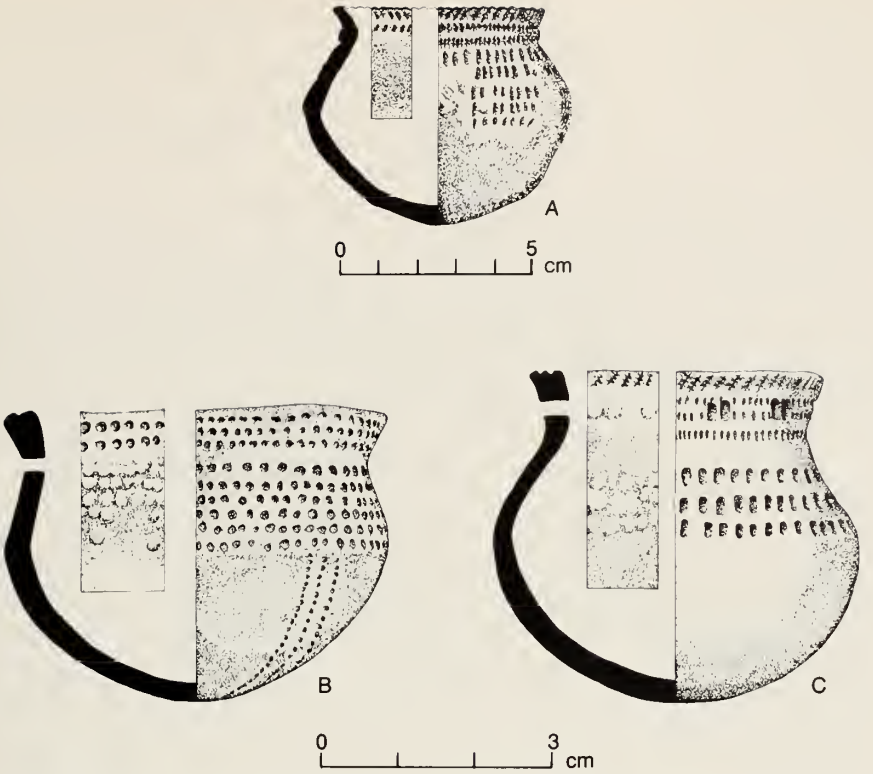

Fig. 42 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 1; B, no. 2; C, no. 4

Pot no. 7 (Pl. 104B) was approximately 7 cm high and 9 cm in diameter. The hollow circular object that was used to make the punctations on the exterior of this vessel and on the lip was probably a reed or a bird bone.

Pot no. 8 (Pl. 104A) was approximately 4.6 cm high and 5.5 cm in diameter. The vessel was decorated by pressing a textile or basketry strip into the wet clay.

Pot no. 9 (Pl. 105A) had an oral diameter of approximately 6.5 cm. This specimen, too, was decorated with either basketry or textile impressions, as well as with linear punctations. Both the outer surface of the vessel and the lip were painted with red ochre.

Pot no. 10 (Pl. 106B) is a small, undecorated cup-shaped vessel that was approximately 2.7 cm high and 4.5 cm in diameter.

Pot no. 11 (Pl. 106A) is represented by a single rim-sherd only 3 cm long and 2.1 cm high.

Pot no. 12 (Pl. 106D) is probably a Blackduck vessel.

Pot no. 13 (Pl. 105B) is a crudely fashioned vessel with a thin everted lip. It was probably decorated by pressing a strip of fabric or basketry into the wet clay.

Pot no. 14 (Pl. 106C), also represented by a single rim-sherd, was decorated by pressing a piece of fabric into the wet clay before the punctations were made.

Pot no. 15 (Pl. 105C) is also decorated by fabric impression and punctation; and again the fabric impression was applied first.

Pot no. 16 (Pl. 103B) is the largest vessel in this series, being 8.2 cm high and 9.0 cm in diameter. Decoration consists of five horizontal lines of rectangular punctations on the exterior of the vessel, one line of similar punctations on the lip, and a final line on the interior of the rim.

Pot no. 17 is not illustrated. It is represented in the collection by a single fabric-impressed rim only 2 cm long.

Apart from the three florally decorated specimens mentioned earlier, the Oak Point Island Mound produced a total of 3596 small glass beads. These were all round or tubular specimens in black, white (Pl. 107), and blue. They were classified according to the system devised by Kenneth E. and Martha Kidd (1970) with the following result:

Colour	*Type*	*No.*
White	11a13	2918
White	1a 5	467
Blue	11a31	181
Black	11a 6	30
Total		3596

Conclusions

If we compare the mounds of northwestern Ontario with those of southern Ontario, there are some obvious similarities and some equally obvious differences. The most conspicuous similarity, perhaps, is in the nature of the sites on which the mounds were built. Their builders showed a marked tendency to site them on points rather than in bays, and always placed them so that they overlooked broad stretches of water. In addition, the mounds were usually placed at the highest possible elevation within the selected area. The fact that they occur as a rule on the north side of the bodies of water they overlook suggests that they were built in the spring or early summer; for the builders selected sites that would be warmed most readily by the returning sun.

Mounds from the two areas in Ontario in which such structures occur are also similar in that they both exhibit a broad range of burial types; in both areas, as we have seen, there are primary or flesh burials, secondary burials—bundled as well as scattered—and cremations; and each of the areas contains both individual and mass graves. The practice of dismembering bodies by mechanical rather than natural processes is probably more common in the northwest than in the south. The removal of the brain through an occipital opening in the skull is also limited, as is masking, to the mound burials of northwestern Ontario.

In both areas, too, we find pieces and clusters of grave furniture associated with particular individuals and other pieces and clusters that apparently lack any such individual association. Such differences are of primary importance in that they reflect different levels of sociological process. Offerings placed with a particular individual would have been placed there during, or following, the ceremony associated with the individual's burial. The offerings may or may not have been intended for his future use; but that is a different problem, and one we may safely leave to our colleagues in theology. Here we are concerned with the living; for anthropologists have long ago demonstrated that in any small group, such as the family, the established patterns of interaction are disrupted by the death of a member; consequently, a new equilibrium must be established, one that is appropriate to the new situation. This new equilibrium is achieved, in part, through a series of ritual acts that collectively make up the burial ceremony. The placing of the grave offerings serves a dual function: it is the final symbolic act of the old disrupted system; and it is the first act—not symbolic but actual—of the surviving family members as they grope towards a new equilibrium (van Gennep, 1975 : XIII).

The items of grave furniture not associated with a particular individual served the same integrative function as the family offerings discussed above. They operated, however, not at the family level but at some higher level of social organization; and the associated ritual, therefore, would have embraced some larger social unit than the extended family—probably the band. Father

Jean de Brébeuf (Thwaites 1896–1901, Vol. 10:279–305) described a similar situation among the Huron, and Kenyon (1982:227–228) reported the same pattern for the Neutral. In both instances there were items and clusters of grave furniture that pertained to specific individuals, as well as items and clusters of offerings that pertained to a number of individuals occupying a common grave. With the Huron we have, in addition to Brébeuf's description of the burial, a nice correlation between individual offerings and family ceremonies on the one hand, and group offerings and community ceremonies on the other.

And so it must have been with the mound-builders. For they, too, faced the same problems in this regard as did the Huron and the Neutral. In fact, the problem of social integration is probably the same for all such peoples and is solved in essentially the same way. Both family and community sentiments are strengthened by their members' participation in common social activities and religious rituals. This would have been particularly important for small dispersed bands such as the mound-builders of Ontario, who would have met together only once or twice a year (cf. Renfrew 1973:144 and Burl 1979:122).

There are, however, significant differences in the kinds of grave furniture that are found in the two areas. Pan-pipes and cannon-bone daggers are found only in southern Ontario mounds; pottery vessels are found only in northern Ontario mounds, and, it would appear, only during the Blackduck period. The absence of pottery vessels from the mounds of southern Ontario suggests a strong Adena influence in that area, for pottery vessels were not used as grave furniture by the Adena peoples (Dragoo 1963:246), while the Hopewell peoples used them extensively. Further excavation and analysis will eventually enable us to isolate and explain most of these differences, when the Ontario mounds are compared and contrasted with each other and with similar structures in the northeastern United States. For these are historical questions of the kind routinely examined in archaeological essays and site reports.

If we look at the Ontario mounds as a group, we are clearly dealing with the northern fringes of a larger culture area; for mound-building was introduced into Ontario from the south, as was noted in the introduction to this report. But besides the question of historic origins, there is the problem of purpose or function. These are quite separate questions, and we must address ourselves to them separately if we hope to answer them.

David Boyle dwelt at some length on the problem of purpose or function in his 1897 essay on mounds. That he was aware of the complexity of the subject is evident in the following quotation:

> It is perhaps safe to affirm that the largest number of mounds have been made for burial purposes, which we have supposed to be the original *motif* in the construction of such earth-works, yet some of us are very much puzzled to account for the other very large number that do not appear to have had anything to do with human interments, and here, of course, are excepted such as were most probably defensive entrenchments. But there are people who, without much hesitation, prate fluently about "beacon mounds", "sacrificial mounds", "temple mounds", "sacred mounds", and so

> on, as if by the book. There are only two kinds of tumuli respecting which it is sometimes possible to speak with assurance as to their purpose, and one, as to its appearance. The former are burial and fortification works, and the latter, what is known as "effigy", representing an animal of some kind—man, beast, or bird. Of burial heaps certainty is reached only after a thorough examination; there is nothing in their exterior to indicate their purpose. Defensive banks form an enclosure, and it is understood that these were probably surmounted by some sort of wooden structure. In many cases the intention of enclosures may have been something quite different. Some effigy mounds were also burial mounds.

The basic reason for mound-building, Boyle tells us, is rooted in the very nature of man. As he noted, "The making of mounds, cairns, and pyramids seems to be inseparable from human nature, embodying ideas of safety strength, advantage, superiority, dignity, honor or worship connected with the living or with the dead."

Today, we cannot accept Boyle's explanation. We feel that the building of mounds, for whatever purpose, is a cultural phenomenon, not a biological one. But the question he raised is still valid, and still unanswered. Why *do* people build mounds? On those rare occasions when this question has been raised in the past, mounds were usually seen as tombstones, as monuments marking the graves of important people. And it was because of this belief, of course, that Wallbridge and Boyle were so perplexed when they excavated "burial mounds" in which no one was buried. Most of the mounds do, in fact, contain burials, but so do St Paul's Cathedral and Westminster Abbey. With these, the relationship is known: our honoured dead are buried in cathedrals and abbeys because they are sacred places. What, then, is the relationship between "burial mounds" and the skeletal remains that are usually found within them? We might profitably step back at this point in the hope that a broader perspective will lead to more profound insights; for keeping our noses to the grindstone, though generally admirable, can seriously restrict our vision.

If we look at mound-building as a social and cultural phenomenon rather than as a specific trait that appears by diffusion in some particular historical sequence, then two things are immediately apparent. First, mound-building is a very widespread phenomenon; it occurs throughout vast areas—in Europe, where we find the familiar barrows, passage graves, etc.; in the New World, where we have burial mounds, effigy mounds, temple mounds, and earthworks; and also in Africa, the Near East, the Far East, and throughout most of Polynesia. Secondly, virtually all of the mound-building cultures scattered across the face of the earth are neolithic rather than palaeolithic; that is, mound-building is a characterisitc of food-producers rather than of food-gatherers.

Oddly enough, the mound-builders of Ontario are almost certainly exceptions to this generalization, for the mounds were built long before the introduction of agriculture into this area. To explain the apparent anomaly, it has been suggested that the presence of wild rice in the regions where the mounds occur made possible a more complex system of social organization

than is usually achieved by hunters and gatherers; that is, the beds of wild rice were functionally equivalent to the gardens of horticulturalists. The same situation prevailed, incidentally, on the northwest coast, where the regular appearance of large runs of migratory salmon and other fish enabled the natives to develop highly complex social systems, even though they too were technically hunters and gatherers.

If mound-building is functionally related to food production, as it appears to be, then we must address ourselves to the following question: by what social and psychological processes was man converted from a food-gatherer to a food-producer?

In discussing similar problems in Great Britain, Aubrey Burl (1979:22) made the following comment: "Neolithic peasants were not modern men dressed up in shabby leather clothes but people whose thoughts and values were very different from our own." And a modern novelist, Leslie P. Hartley (1953), offered the same insight when he remarked, "The past is a foreign country; they do things differently there." These are pithy comments and quite germane to the problem at hand; for, as Colin Renfrew expressed it (1973:8), "we have to consider what kind of social organisation could have led to the building of such monuments in rather small communities with a relatively undifferentiated economy."

The problem is complex and offers little hope of an immediate solution. On the other hand, we are not completely without insight into the processes involved. Johnston, for example, pointed out that, at the Serpent Mound site, primary burial was essentially limited to those individuals who were interred in submound pits and who were supplied with grave offerings. Spence and Harper reported a similar situation at the Cameron's Point site and concluded, as did Johnston, that this patterning reflected the presence of status differentiation within the communities involved. This theory was developed further in a recent publication on the archaeology of the Hopewell (Spence, Finlayson, and Pihl 1979).

There are other pertinent data. It has already been noted that the Ontario mounds tend to be concentrated on points of land or on raised terraces and that they invariably overlook broad stretches of water. To the south, in the eastern United States, a similar situation prevails, for there, too, we find the same concern with visibility. "Nearly every major waterway of the Midwest was bordered by clusters of mounds" (Silverberg 1974:2). That this was not a purely local phenomenon becomes evident when we look farther afield. Jacquetta and Christopher Hawkes (1958:55), for example, comment on the conspicuous manner in which long barrows "cluster along the coasts and round inland waterways". They noted, too, that along the Severn, a number of them were set "on jutting headlands, where they can command superbly the great spreading expanse of the valley".

We find the same situation in western Europe. Burial mounds, Glob tells us (1971:99), "are found in the coastal areas of Western Europe...not by any means everywhere, but arranged in groups around fjords or bays, or places further inland to which rivers give access". We would expect, of course, that the burial mounds of post-mesolithic Europe, like those of northeastern North America, would be concentrated along the coast or in river valleys, for that, after all, is where the people were living. But within both these general areas,

there is a tendency for the mounds to be placed in prominent positions. This is true not only of the Severn valley, mentioned earlier, but also of such distant places as Denmark, where Glob recorded the same phenomenon. "This situation on high ground with views over sea and fjord", he tells us (1967:90), "is characteristic of many of our magnificent passage grave mounds. It is something they have in common with the Bronze Age mounds, with which they can therefore be easily confused at a distance." As we have seen throughout this volume, the same thing is true of the Ontario burial mounds, particularly those along the Trent and Rainy River systems.

Another widespread characteristic of mound-building groups is the fact that the vast majority of them buried only a few of their dead in mounds. These, the honoured dead, as Dragoo so aptly called them, were set apart from the commonalty, whose remains have largely disappeared from the historical record. This is certainly true of the mound-building peoples of Ontario, for the populations that built the mounds must have been much larger than the populations that are buried within them. Only the elite, then, were buried with the most lavish and enduring honours that the band could provide. And even amongst the honoured dead themselves, as both Johnston and Spence have shown, the laurels were not distributed evenly.

This would suggest that the mound-building peoples of both western Europe and northeastern North America had some more complex system of social organization than is usually found among the egalitarian hunters and gatherers who preceded them. On the other hand, there is no compelling reason to postulate the existence of even a tribal level of organization among the mound-builders of Ontario. For here, a relatively small, loosely organized group such as the band would probably have been able to assemble the work-force required to build even the largest Laurel mound on Rainy River. The Serpent Mound, too, could have been built by a similar group of Point Peninsula peoples.

In Europe, Colin Renfrew addressed himself to this same problem. He studied the distribution of megalithic tombs on Malta, in the Mediterranean, and on two islands off the coast of Scotland—Arran and Rousay. He was apparently influenced by a map that V. Gordon Childe had published a generation earlier. Childe had plotted the location of the thirteen mounds on Rousay, one of the Orkney Islands, and mentioned in passing that the distribution of mounds was roughly the same as the distribution of farmsteads at the time of his visit.

Renfrew re-examined Childe's data, consulted a geological map, and concluded that the distribution of farmsteads was related to the distribution of arable land on the island; that is to say, the farmsteads occupied the small deposits of glacial debris that were the only areas suitable for cultivation. When Renfrew plotted the distribution of the burial mounds on his geological map (Renfrew 1973:136, fig. 30), he found that the farmsteads and the mounds had the same distribution because they were related to the deposits of arable land on the island in the same way. Each of the mounds, he tells us, was situated on a prominent point within its own territory. "And it is indeed striking", he continues, "that these territories, on the arable land, show an analogous distribution to the crofts and farming settlements of the last century."

From these data, and from similar findings on Arran and Malta, Renfrew concluded that the different territories were originally inhabited by small communities that used the mound sites as ceremonial centres. The mounds, that is to say, played much the same part that churches played until very recently in our own rural communities. In both cases, the structures were set on plots of sacred ground, plots that had been sanctified by the performance of appropriate rituals. And being sacred, they were places of worship and burying grounds for the surrounding farmers—probably no more than a few related families. For the post-mesolithic people of Europe, the mounds announced to passers-by that the surrounding territory was already inhabited, and thus they were set in prominent places. In all probability, they served as social centres as well as ceremonial centres, but direct evidence of this is not available at present. And it may never be available. But we can be quite sure that, thrust high above the surrounding countryside and waterways, the mounds stood forth proudly as symbols of social and religious cohesion.

The European experience during the post-mesolithic period is pertinent to our discussion of mound-building in Ontario because both groups were involved in the same social processes. The fact that the transition from food gathering to food production occurred at different times throughout the world need not concern us here; for I am not suggesting a diffusionist model, but a functional model. I am suggesting that the social and psychological processes whereby man was converted (or converted himself) from a palaeolithic hunter and gatherer to a neolithic farmer have produced similar results at different places and at different times because the processes themselves were similar.

Much has been written about the specific changes that resulted from the neolithic revolution. The appearance of small settlements that gradually developed into towns and cities has been well documented throughout much of the world. The appearance of pottery, as well as a variety of artifacts associated directly with horticulture, has also been widely reported. Almost invariably, this process has resulted in an increase in population, which in turn, has led to sociological adjustments that were probably both slow and painful. For new situations bring forth new patterns of behaviour; and because they are unfamiliar, the new patterns of behaviour, as well as the new relationships that bring them forth, place heavy stresses on systems that were initially shaped to other tasks. It matters not whether the systems are physical, social, or psychological—the stresses, like the agonies, are identical.

Because the neolithic revolution happened so long ago, and because the historic records are so incomplete, we tend to see it largely in mechanical terms. We speak of the *rise* of towns and cities, the *spread* of an art style moving slowly up the Danube, for example, or the *replacement* of one pottery type by another. These things happened, of course, and it is to the credit of a long and diligent line of archaeologists that they have finally been recorded. But we must remind ourselves from time to time that the notation we use to describe these events is often a form of shorthand. Even while we employ it, we realize—or should realize—that it is nothing more than a convention, a way of encapsulating and personifying the results of social processes. For towns and cities only *arise* metaphorically; in fact, they are *built*, one house at a time,

so to speak, by small groups of people. And neither art styles nor pottery types *spread* up river valleys or through mountain passes; they are *carried* there by people, either as concrete objects or as ideas.

We must look at the neolithic revolution, then, in terms of social processes rather than as the mechanical replacement of one technological or economic system by another. And we should attempt, as least, to isolate and identify those characteristics of the palaeolithic world that were incompatible with the new economic and social relationships.

The palaeolithic hunter and gatherer inhabited a world that was essentially static. It had been shaped by mythological forces; and its functioning from day to day, and from season to season, was sustained by a complex set of rituals and taboos that most of us would describe as mechanical. A particularly vivid account of this system is provided by Stefansson (1971) in a prefatory page on *Taboos Among the Eskimos* tipped inside the front cover of his book *My Life with the Eskimo*.

It is significant also that palaeolithic man does not intervene in any real way in the reproduction of the animals he hunts or the seeds and berries he collects. Year after year these appear quite spontaneously, provided only that the necessary rituals are performed and the appropriate taboos are observed. Neolithic man, on the other hand, *does* intervene in the reproductive process. For the first time, plants appeared because man had planted them and tended the crops to maturity. They did not appear spontaneously; nor were they sustained only by ritual acts. This was a deceptively simple shift; but by that single process, and without any conscious knowing, man ushered in a new act in the human drama. Before the curtain fell, man's relationships with the world around him were completely restructured, as were the social relationships that provided structure and meaning in his existence. In fact, the economic shift from food-gathering to food-producing included a religious and cosmological transformation that was probably as fundamental as any that has occurred since. It was surely an event of the same magnitude as the rise of Christianity or the scientific revolution of the 16th and 17th centuries. In its broadest outline, the neolithic revolution was the process by which Diana, goddess of the hunt, was overwhelmed by Ceres, goddess of horticulture.

Here in Ontario, as throughout much of the world, the process was never completed. For the Precambrian rocks of northern Ontario are still dotted with pictographs and petroglyphs—cabalistic figures from remotest antiquity. In southern Ontario, on the other hand, these ancient symbols were superseded by more recent deities who presided over rituals such as the Green Corn ceremony. In the modern world, the pictographs and petroglyphs seem strangely out of place. We find them in odd nooks and crannies of the landscape, on isolated rock faces in northern Ontario, deep in the caves of Spain and France, or in remote corners of Africa. We recognize them as belonging to a different world, one that is rapidly fading from sight. And it is quite fitting, perhaps, that they should disappear with the cultures they symbolized and sustained throughout countless centuries. For even gods are mortal. After millennia, our own gods are showing signs of weariness. Christianity, with its pastoral symbolism, is beginning to feel uncomfortable in the concrete and plastic jungles we have built around us.

Let us return, finally, to the burial mounds of Ontario. These appear to be related in some complex fashion to the neolithic revolution. Their primary function, in all probability, was to mark the locations of sacred places and to establish territorial occupation. The sites they occupied were used as ceremonial centres for the loosely organized bands that occupied the surrounding areas (cf. Speck 1915). After spending the winter scattered throughout the band territory in small family groups, the people would assemble at a traditional spot, probably in the spring when fish were spawning or in the fall when beds of wild rice would be ready for harvesting. Only at those periods would food resources have been sufficiently abundant to maintain the entire band at one place.

These assemblies provided an opportunity for social interaction on a broader scale than would have been possible throughout most of the year. It was during such periods, too, that the chiefs and other leaders of the group could discuss band affairs with the various family heads and elders. But above all, such occasions provided an opportunity for all of the band members to participate in those rituals and ceremonies that reaffirmed and sustained community sentiments.

The nature of the ceremonies themselves cannot be determined at present, although we are offered a few tantalizing clues as to the subject matter around which they revolved. Most of the available data are derived, of course, from the burials found within the mounds and in submound pits.

In northwestern Ontario, the skulls that have openings in their occipital regions are reasonably clear evidence of power transfer. The individuals whose skulls were opened would have had some unusual and highly valued personal characteristics; the occipital openings made it possible to remove their brains and to transfer those characteristics from the dead to the living. This would have been accomplished through a religious ceremony that included eating the brain that was the seat of such wondrous powers. The eating, of course, could have been either actual or symbolic. In either event, the highly valued qualities would not be lost to the band through death but would be preserved through reincarnation.

Such practices were probably much more widespread than the archaeological evidence would suggest at first glance; for we know that highly valued characteristics are often located in organs other than the brain. Our own western European culture, for example, locates many of its most highly prized characteristics in the heart. The point is that power transfer was probably much more widespread than current data suggest, simply because the removal of most organs for this purpose would have left no skeletal evidence.

The use of fire for cremation is well documented in both northern and southern Ontario. But the archaeological evidence of its use for some further purpose is equally well founded. The use of smoke to carry messages to the gods is well known and may account for the extensive use of non-crematory fires in the mounds. But all we can actually say is that fire appears to have been ritually associated with the act of mound-building, quite apart from its use in connection with the burial of the dead.

One of the major ritual acts of the people, however, was the building of the mounds themselves. For it is almost certainly an error to look upon mound-building primarily in terms of engineering. We must see it, rather, as a

by-product of sociological processes; that is, we should look upon mound-building as we look upon the performance of a ballet or drama in our own society. Theatres may arise as a result of our interest in such cultural pursuits, but the significance of a ballet or drama resides, surely, in the performance itself. The play's the thing! Once the mound was built, of course, it would have served, as does a theatre, as a backdrop for other rituals. For once again, it is through such rituals and ceremonies that human groups are bound together and that individual lives are shaped to ancestral patterns.

The masked and painted skulls from Hungry Hall were part of one such ritual. And when it was over, the skulls, like the props of a drama that had run its course, were tossed rather carelessly into the corner of a grave.

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Plates

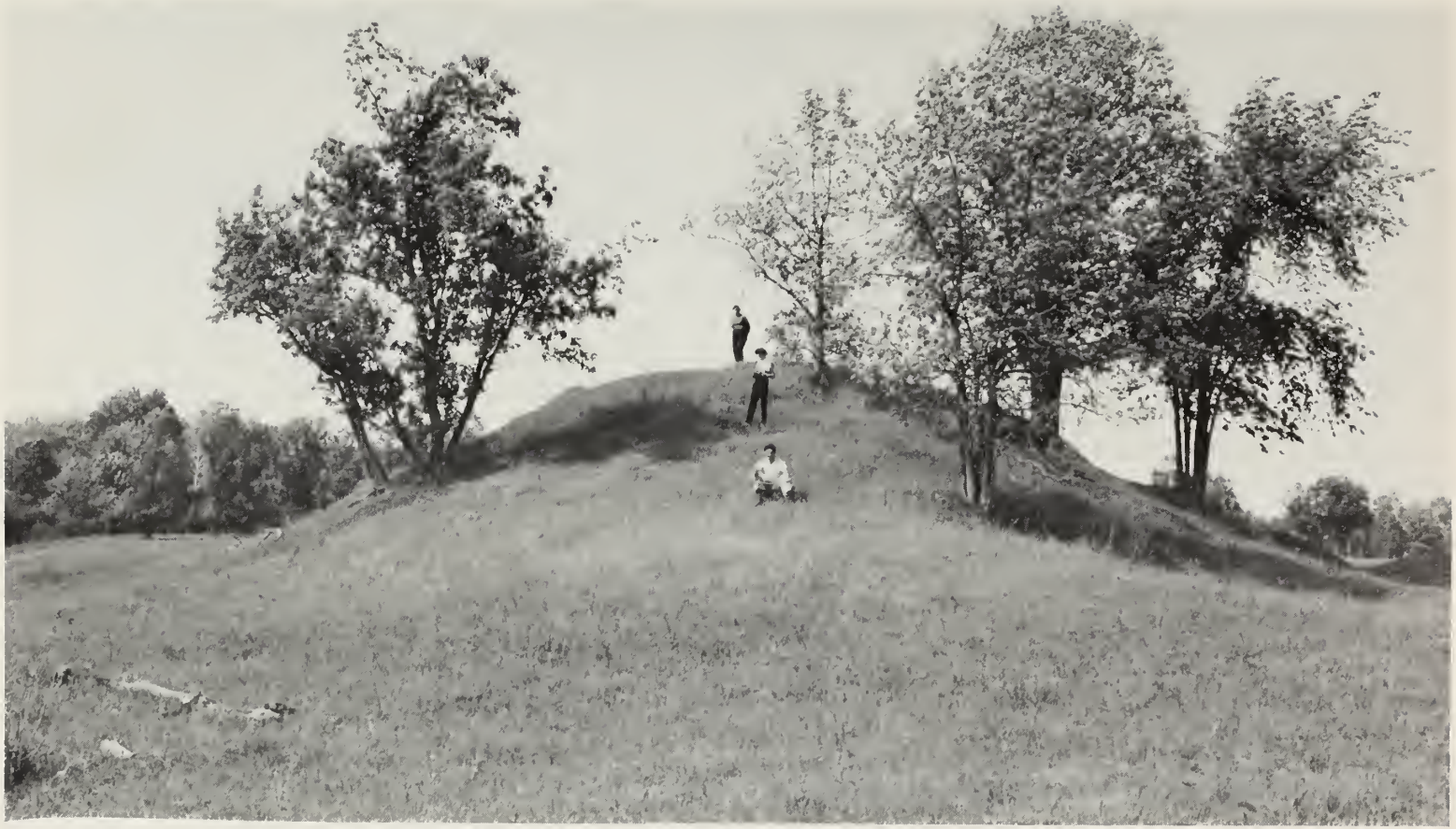

Plate 1 Mound at Long Sault Rapids, Rainy River

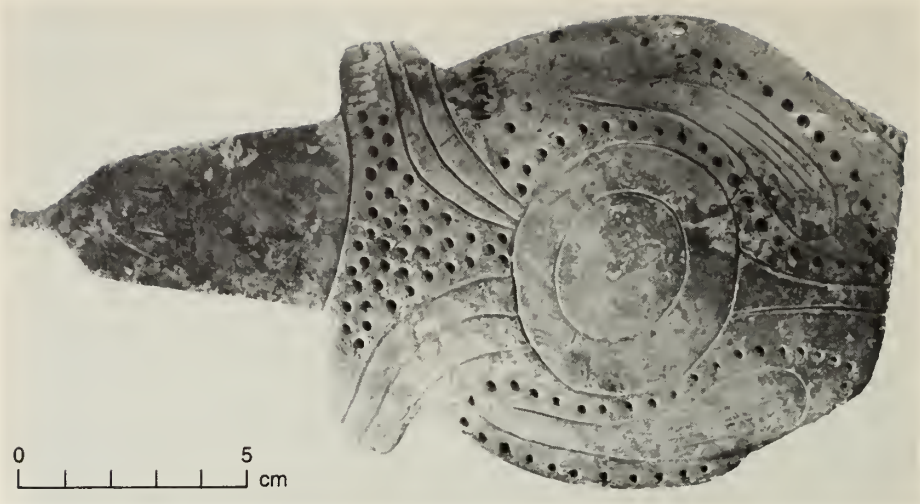

Plate 2 Turtle effigy shell gorget, no. 14818, Miller Mound

Plate 3 Copper bead necklace, nos. 13107–13456, Princess Mound, East Sugar Island

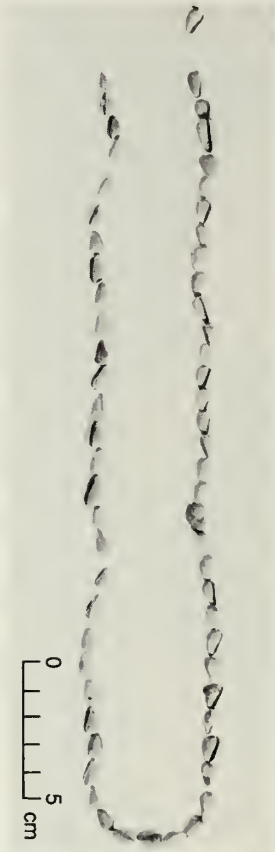

Plate 4 *Marginella* shell bead necklace, nos. 13627–13926, Princess Mound, East Sugar Island

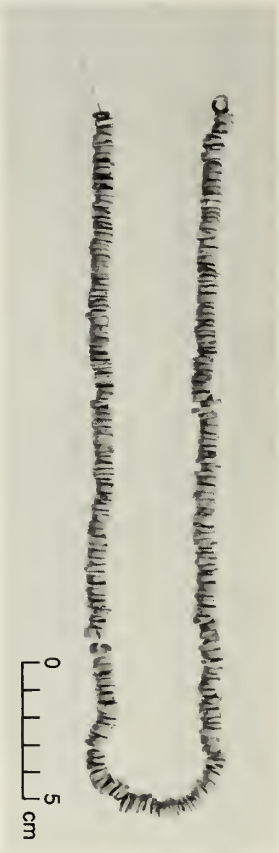

Plate 5 Discoidal shell bead necklace, nos. 13927–14791, Princess Mound, East Sugar Island

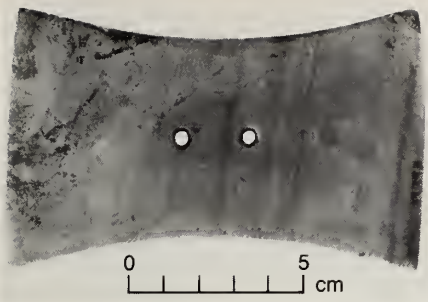

Plate 6 Limestone gorget, no. 14793, Princess Mound, East Sugar Island

Plate 7 Copper adze blade, no. 14823, Princess Mound, East Sugar Island

Plate 8 Pointed whetstones, Le-Vesconte Mound. A, no. 258; B, no. 128; C, no. 116; D, no. 2; E, no. 85; F, no. 1.

Plate 9 Cannon-bone daggers, anterior surface, LeVesconte Mound. A, no. 31; B, no. 26; C, no. 30; D, no. 3; E, no. 10.

Plate 10 (reverse of Pl. 9) Cannon-bone daggers, posterior surface, LeVesconte Mound. A, no. 31; B, no. 26; C, no. 30; D, no. 3; E, no. 10.

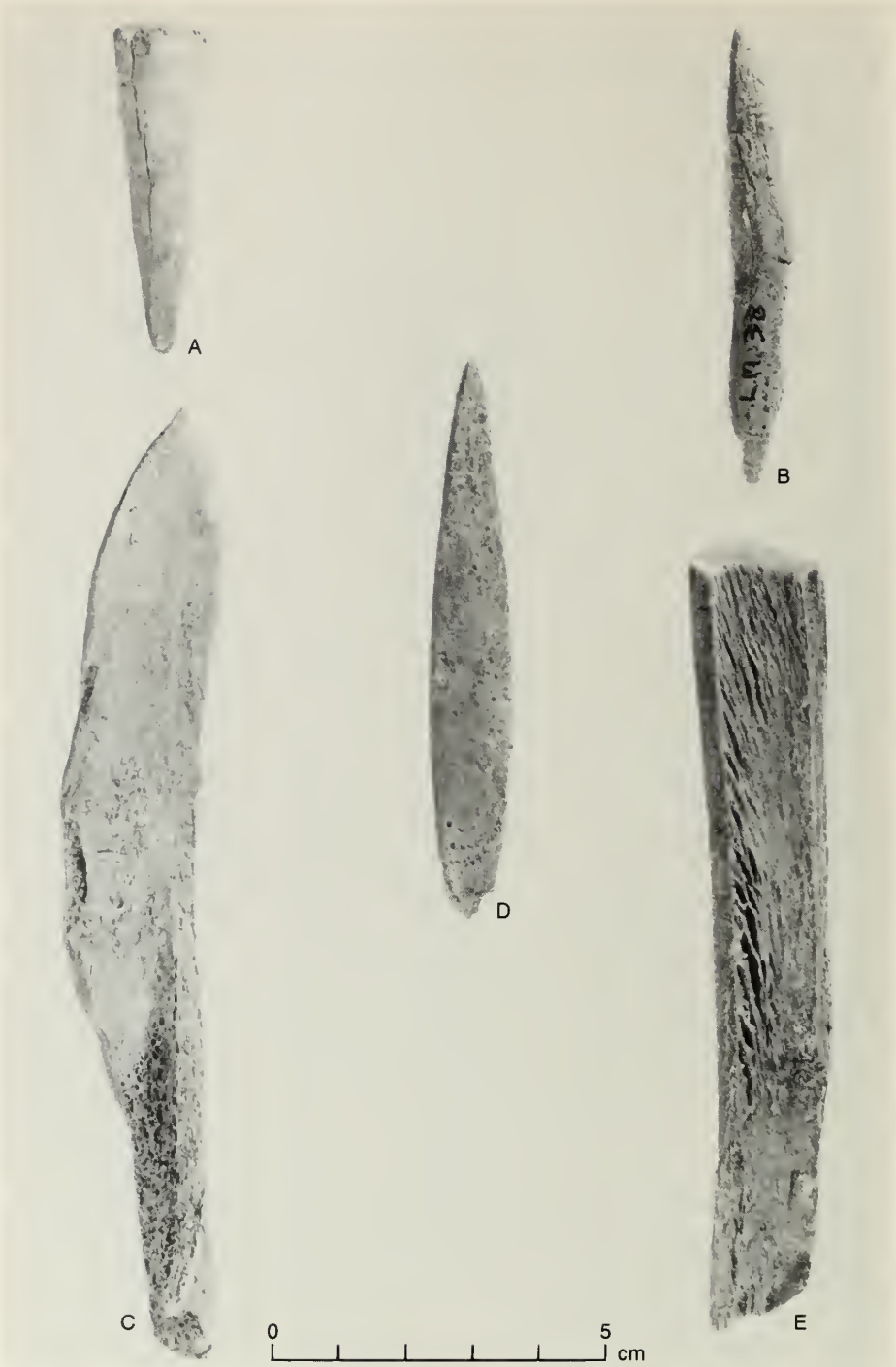

Plate 11 From LeVesconte Mound
A, antler tine punch, no. 32
B, antler point from a composite fish-hook (?), no. 38
C, pointed object fashioned from the long-bone of a large mammal, no. 5
D, bone point, no. 257
E, bone chisel, no. 62

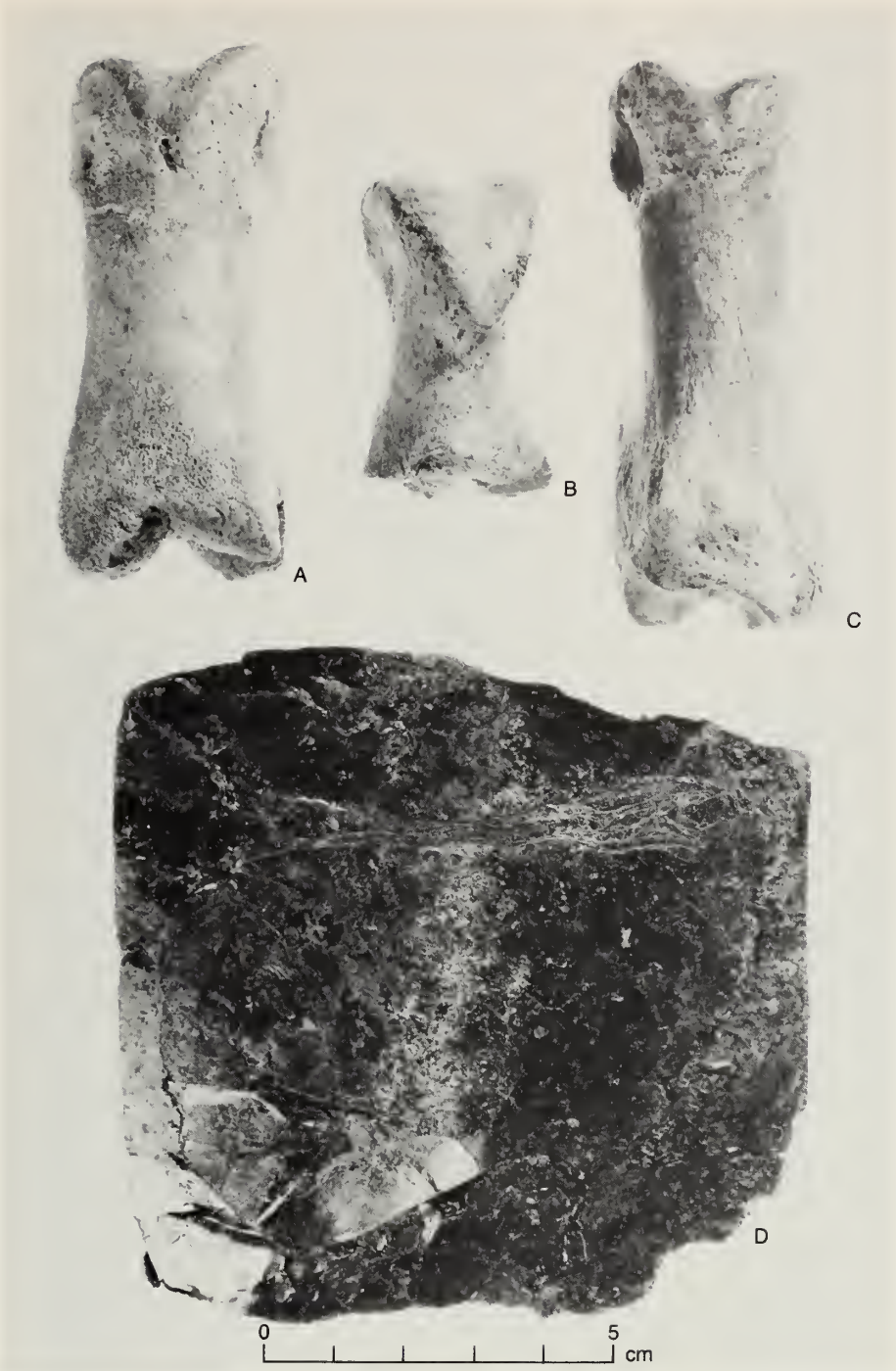

Plate 12 From LeVesconte Mound
A, B, C, longitudinally perforated moose toe-bones, nos. 8, 7, 286
D, cut sheet of biotite mica, no. 16

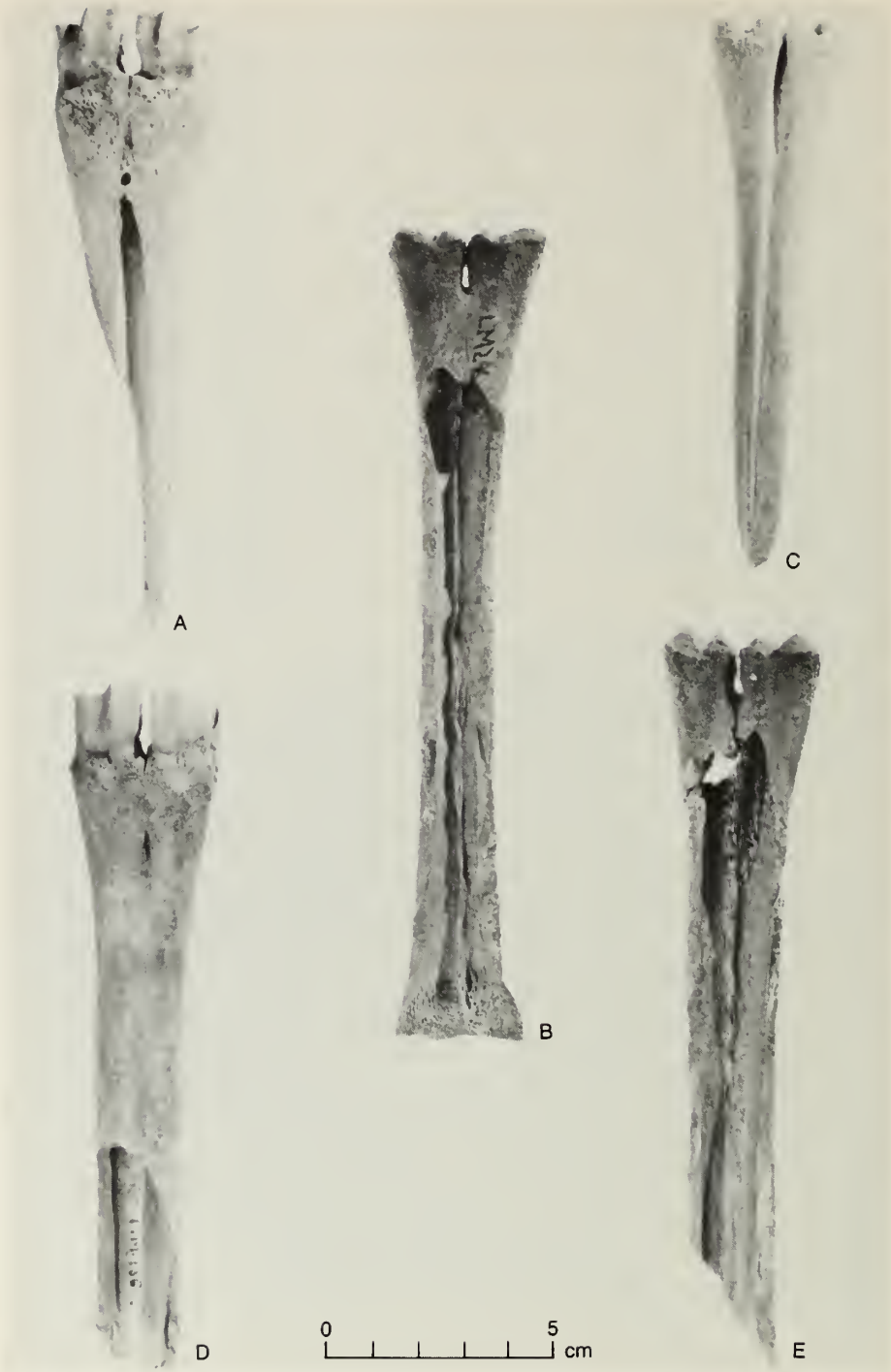

Plate 13 From LeVesconte Mound
A, cannon-bone dagger, no. 27
B, unfinished cannon-bone dagger, no. 296
C, cannon-bone dagger, no. 133
D, unfinished cannon-bone dagger (?), no. 136
E, unfinished cannon-bone dagger, no. 295

Plate 14 Steps in the production of a cannon-bone dagger

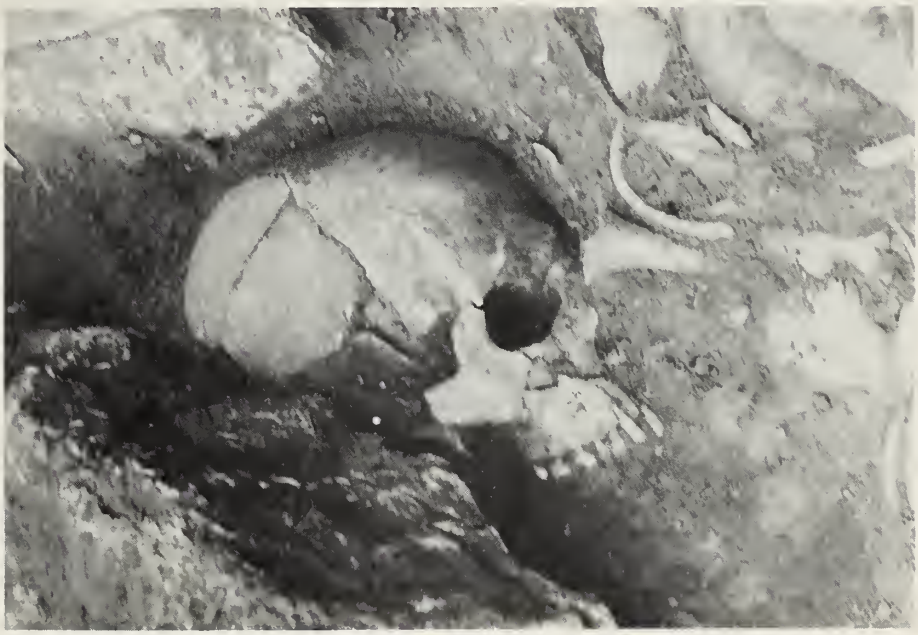

Plate 15 Skull *in situ,* LeVesconte Mound

Plate 16 From LeVesconte Mound
A, B, copper pins, nos. 261, 262
C, copper barb from composite fish-hook (?), no. 117
D, E, F, bone barbs from composite fish-hooks, nos. 260, 40, 41
G, H, bone gorges, nos. 129, 39

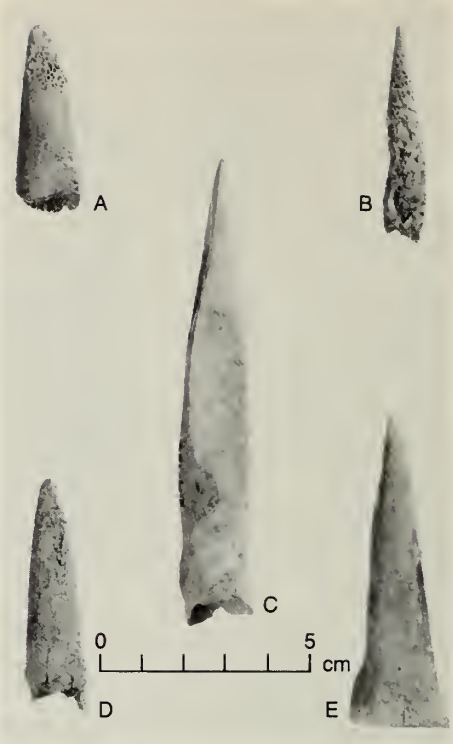

Plate 17 From LeVesconte Mound
A, B, conical points, antler, nos. 37, 264
C, conical point, fashioned from the radius of a large mammal, no. 134
D, E, conical points, antler, nos. 259, 126

Plate 18 Stone "foot", no. 251, LeVesconte Mound

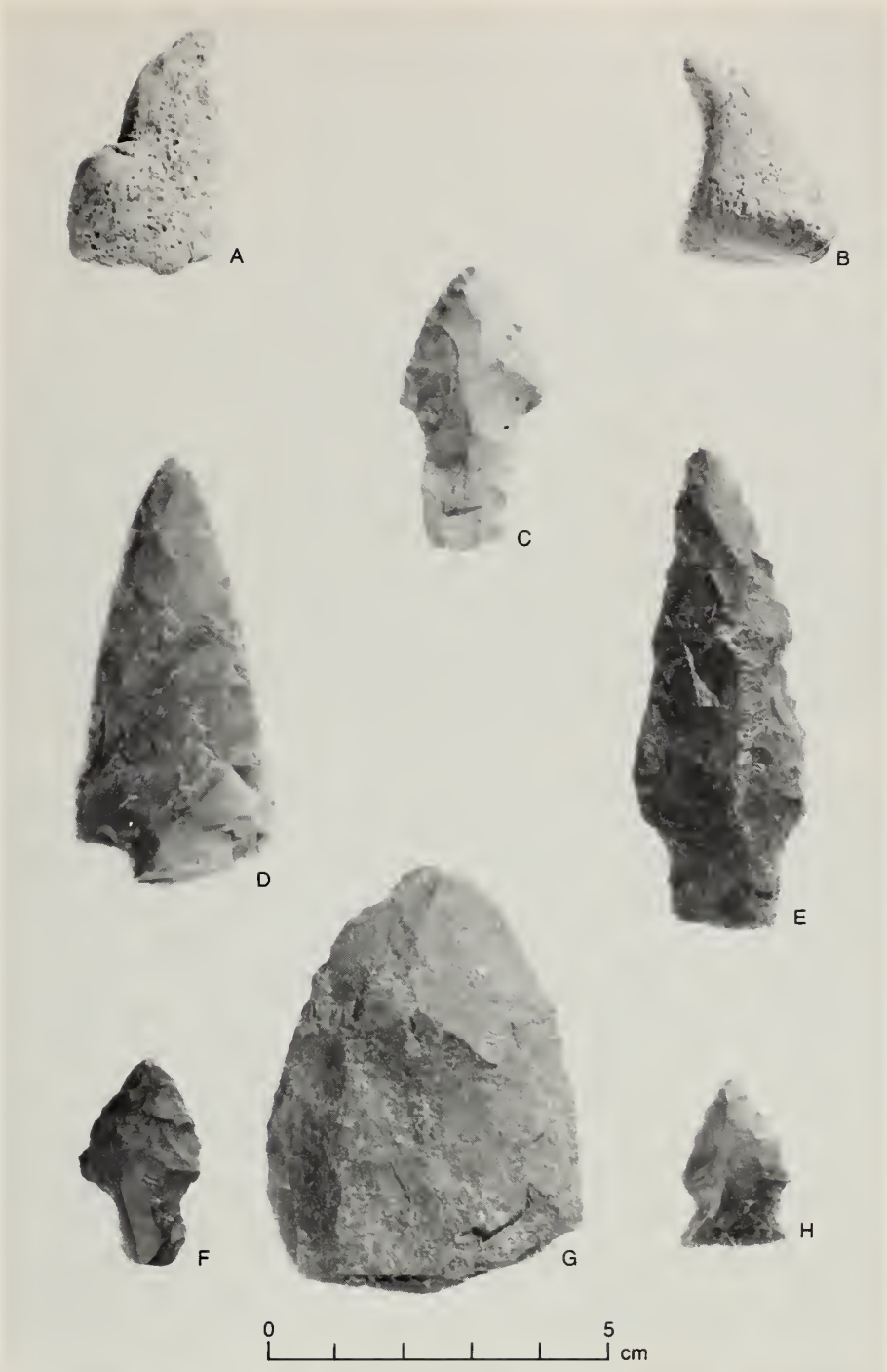

Plate 19 From LeVesconte Mound
A, B, horn corals (*Streptelasmae*), nos. 230, 229
C, flint projectile point, no. 1
D, quartzite point, no. 307
E, quartzite point, no. 271
F, basalt point, no. 278
G, quartzite blade, no. 266
H, flint projectile point, no. 255

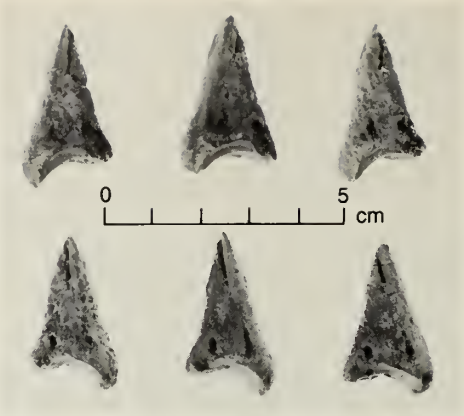

Plate 20 Deer toe-bones, nos. 239–244, LeVesconte Mound

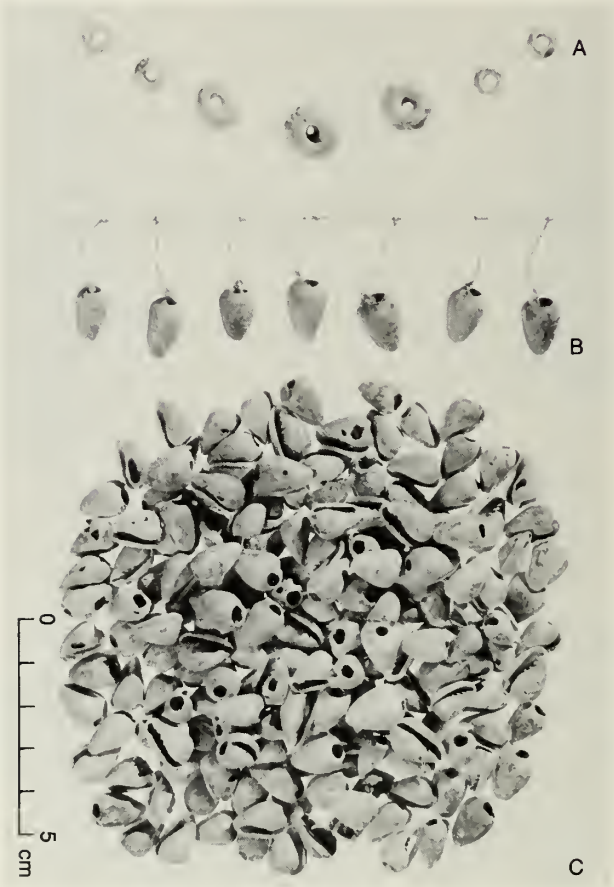

Plate 21 From LeVesconte mound
A, spherical beads fashioned from acorn barnacles, no. 83
B, part of shell bead necklace found with female burial in square 1–D, no. 268
C, shell beads from necklace found with female burial in square 1–D, no. 268

Plate 22 Pan-pipe covers *in situ*, square 2–C, LeVesconte Mound

Plate 23 Trench C, looking west across squares 5, 4, and 3, LeVesconte Mound

Plate 24 Cluster of grave goods, square 3–C, LeVesconte Mound

Plate 25 Barking tools (?), LeVesconte Mound. A, no. 33; B, no. 35; C, no. 34.

Plate 26 Hafted beaver incisors, LeVesconte Mound. A, no. 20; B, no. 269; C, no. 42.

Plate 27 From LeVesconte Mound
A, B, C, antler points, nos. 124, 121, 123
D, bi-pointed bone object, no. 36
E, antler point or harpoon (?), no. 122
F, bone point, no. 125

Plate 28 From LeVesconte Mound
A, shark's tooth pendant, no. 165
B, copper pendant, no. 94
C, conch shell pendant, no. 93

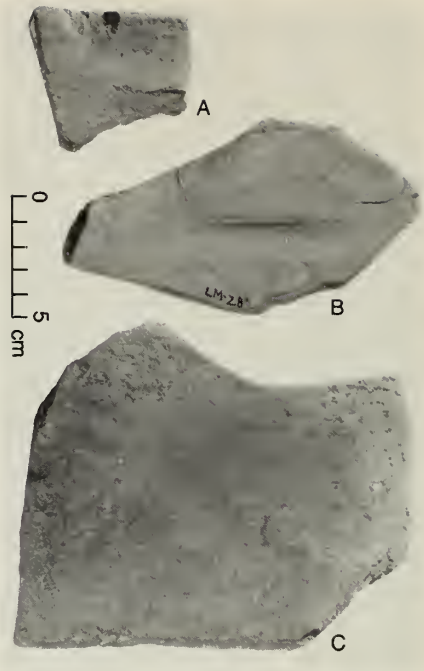

Plate 29 Flat whetstones, LeVesconte Mound. A, no. 252; B, no. 280; C, no. 43.

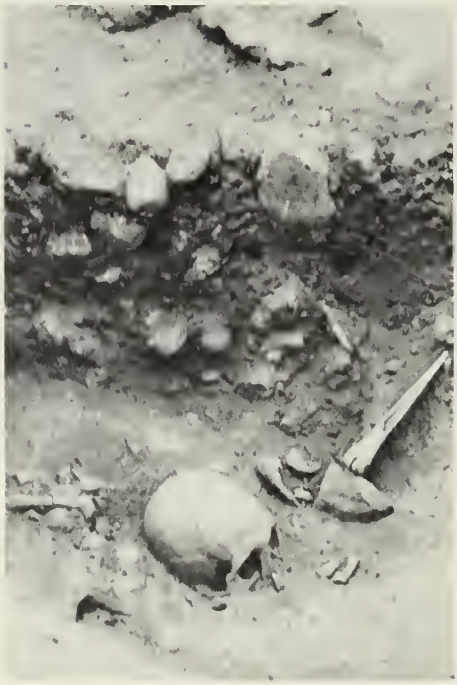

Plate 30 Skull and cannon-bone dagger *in situ*, LeVesconte Mound

Plate 31 Antler toggling harpoon, no. 19, LeVesconte Mound

Plate 32 From LeVesconte mound
A, B, right humeri of common loons, nos. 50, 49
C, worked metapodial bone, no. 291
D, E, worked mammal bones, nos. 290, 289

Plate 33 Adze blades, LeVesconte Mound. A, no. 275; B, no. 276; C, no. 274.

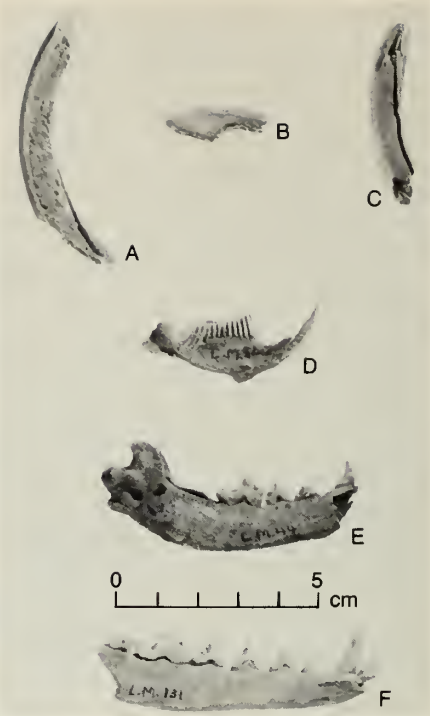

Plate 34 From LeVesconte Mound
A, lower left beaver incisor cut diagonally across the labial face, no. 220
B, lower left beaver incisor notched for hafting, no. 225
C, lower right beaver incisor cut diagonally across the labial face, no. 22
D, muskrat mandible (left), no. 82
E, dog mandible (left), no. 44
F, red fox mandible (left), no. 131

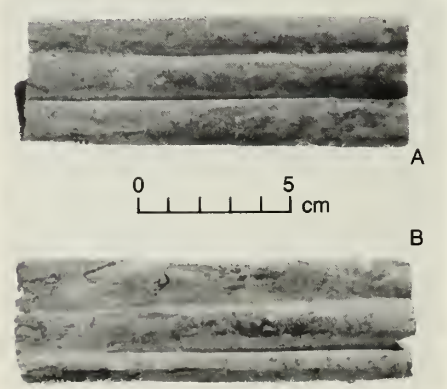

Plate 35 Copper pan-pipe covers, LeVesconte Mound. A, no. 111; B, no. 196.

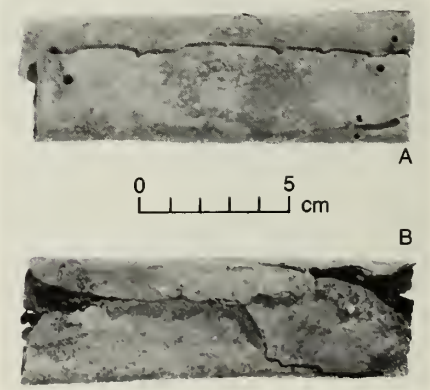

Plate 36 Copper pan-pipe covers (reverse), LeVesconte Mound A, no. 111; B, no. 196.

Plate 37 From LeVesconte Mound
A, B, C, native silver, nos. 179, 180, 186
D, E, fragments of native silver pan-pipe covers, nos. 170, 188
F, G, fragments of polished native silver, nos. 162, 166
H, lump of native silver, no. 164

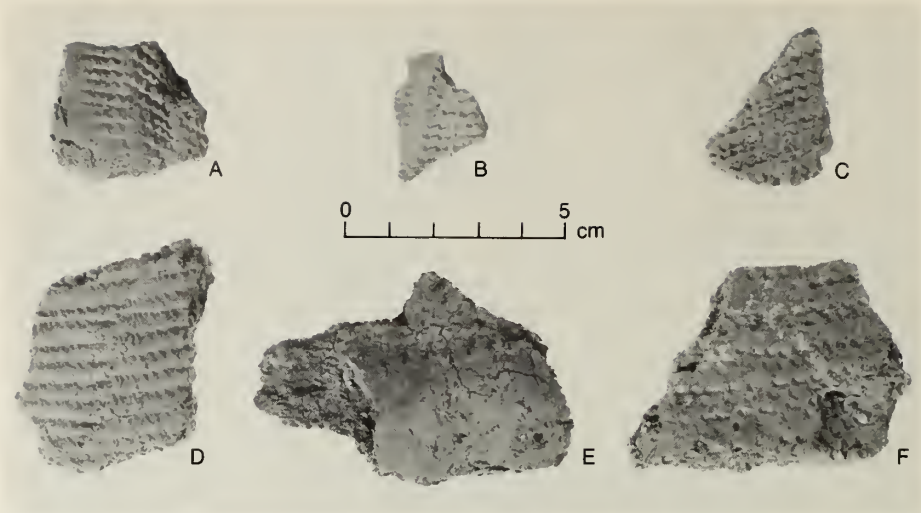

Plate 38 Potsherds from the fill, LeVesconte Mound. A, no. 311; B, no. 313; C, no. 312; D, no. 310; E, no. 292; F, no. 277.

Plate 39 From LeVesconte Mound. A, tip from bone awl or harpoon, no. 308; B, flint drill, no. 309.

Plate 40 Crematorium, LeVesconte Mound

Plate 41 North-south section through Mound 1, Hungry Hall, at 20 feet (6.1m) east. The undulating surface is the result of vandalism.

Plate 42 Upper levels of a submound pit, Hungry Hall, Mound 1

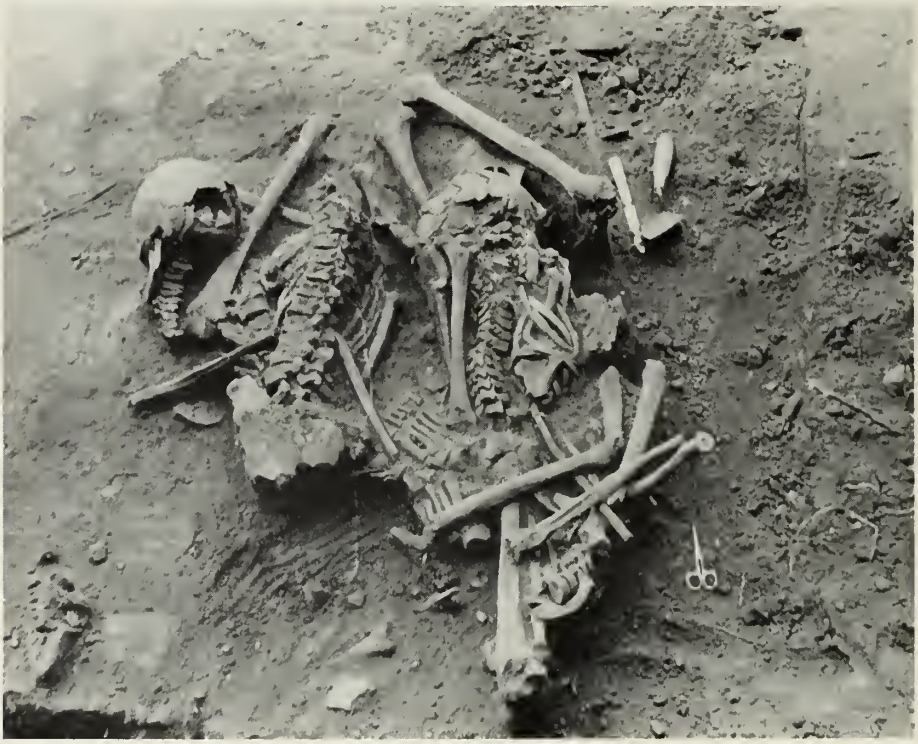

Plate 43 The north cluster, Hungry Hall, Mound 1

Plate 44 Bottom of north cluster, Hungry Hall, Mound 1

Plate 45 East cluster, Hungry Hall, Mound 1

Plate 46 Burial 18, Hungry Hall, Mound 1

Plate 47 Burial pit, Hungry Hall, Mound 1

Plate 48 Submound pit, Hungry Hall, Mound 1

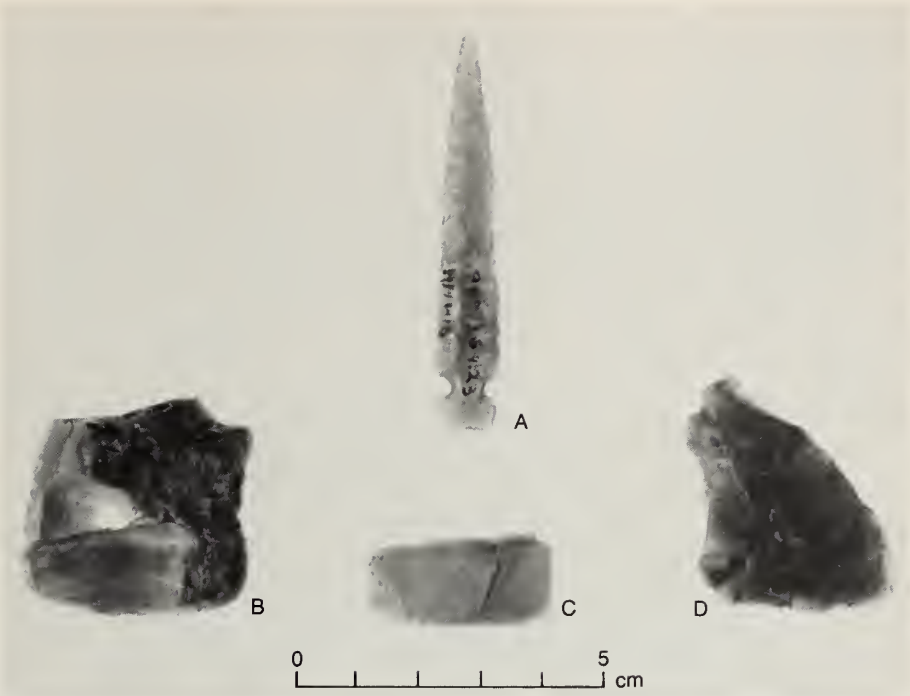

Plate 49 From Hungry Hall, Mound 1
A, chalcedony point, no. 16
B, C, agate scrapers, nos. 57, 52
D, chalcedony scraper, no. 9

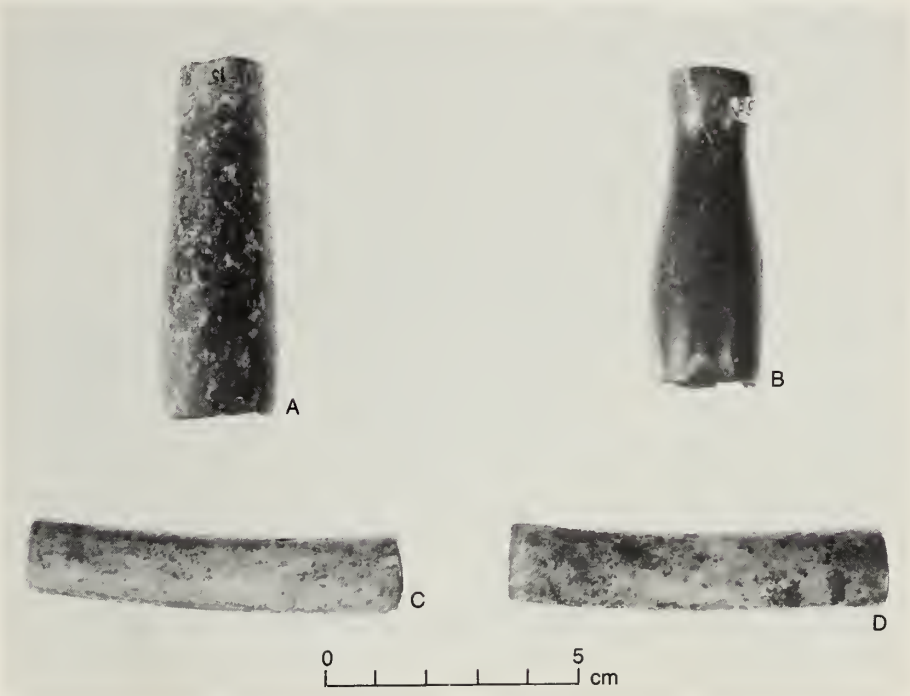

Plate 50 From Hungry Hall, Mound 1
A, B, sucking tubes, nos. 15, 53
C, D, bone beads, nos. 40, 45

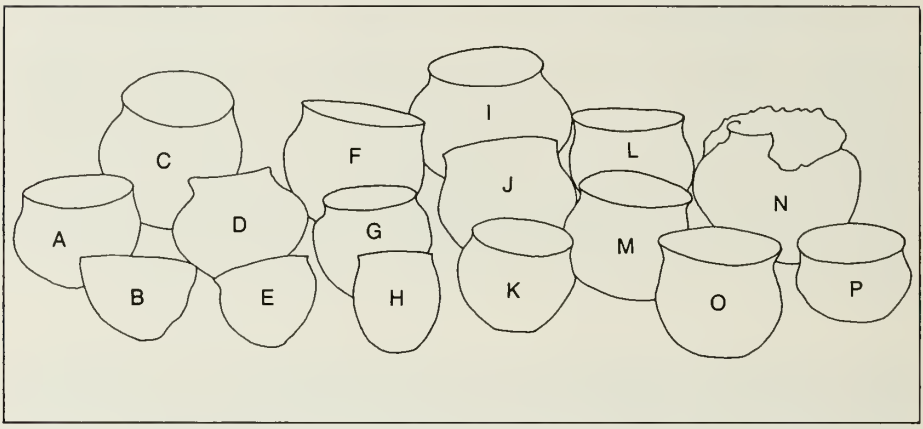

Plate 51 Clay pots, Hungry Hall, Mound 1. A, no. 21; B, no. 31; C, no. 28; D, no. 25; E, no. 20; F, no. 22; G, no. 30; H, no. 27; I, no. 23; J, no. 26; K, no. 18; L, no. 3; M, no. 17; N, no. 32; O, no. 19; P, no. 24.

Plate 52 Clay pots, Hungry Hall, Mound 1. A, no. 27; B, no. 31; C, no. 20.

Plate 53 Clay pots, Hungry Hall, Mound 1. A, no. 26; B, no. 22; C, no. 3.

Plate 54 Clay pot, no. 4, Hungry Hall, Mound 1

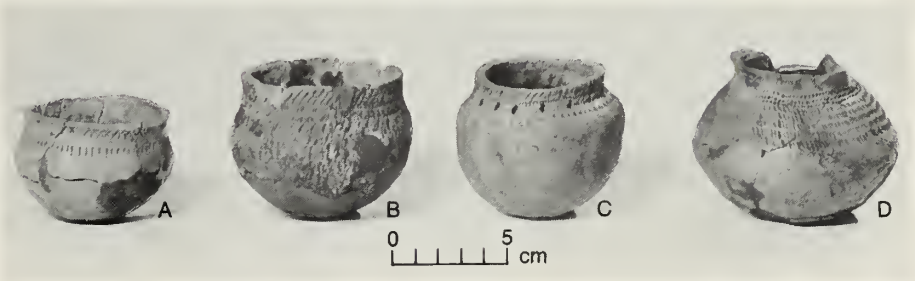

Plate 55 Clay pots, Hungry Hall, Mound 1. A, no. 24; B, no. 21; C, no. 30; D, no. 25.

Plate 56 Rim-sherd, no. 55, Hungry Hall, Mound 1

Plate 57 A, B, bone awls, Hungry Hall, Mound 1, nos.63, 62
C, D, catlinite sucking tubes, Hungry Hall, Mound 2, nos. 99, 100
E, schist blade, burial 18, Hungry Hall, Mound 1, no. 67

Plate 58 Clay pots, Hungry Hall, Mound 1. A, no. 28; B, no. 23; C, no. 32.

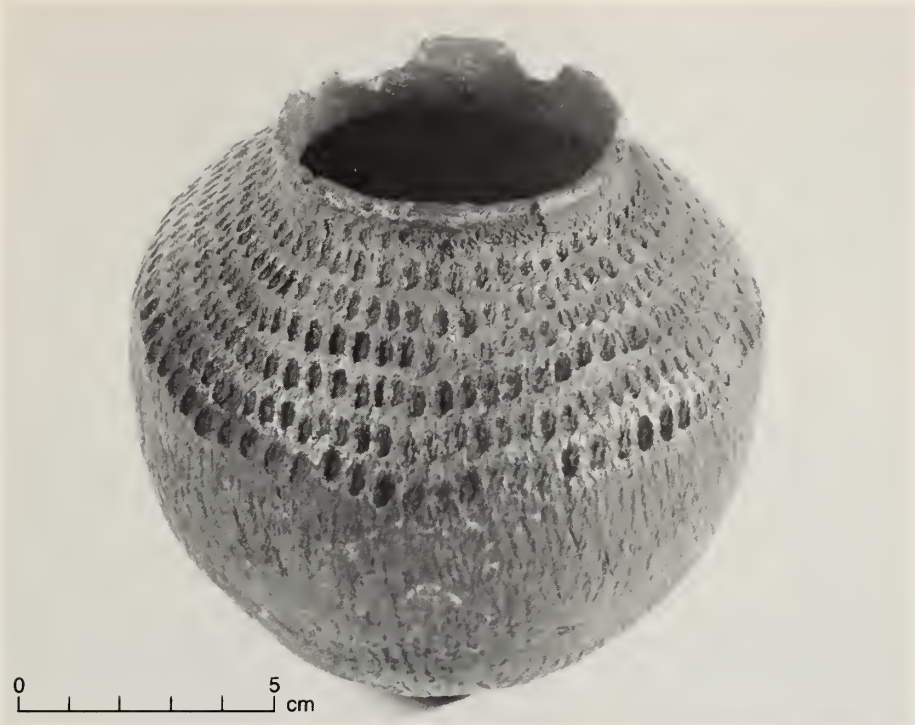

Plate 59 Clay pot, no. 32, Hungry Hall, Mound 1

Plate 60 Clay pot with birchbark lid, no. 32, Hungry Hall, Mound 1

Plate 61 Clay pot, no. 1, Hungry Hall, Mound 1

Plate 62 Clay pots, Hungry Hall, Mound 1. A, no. 17; B, no. 19; C, no. 18.

Plate 63 Clay pot, no. 22, Hungry Hall, Mound 1

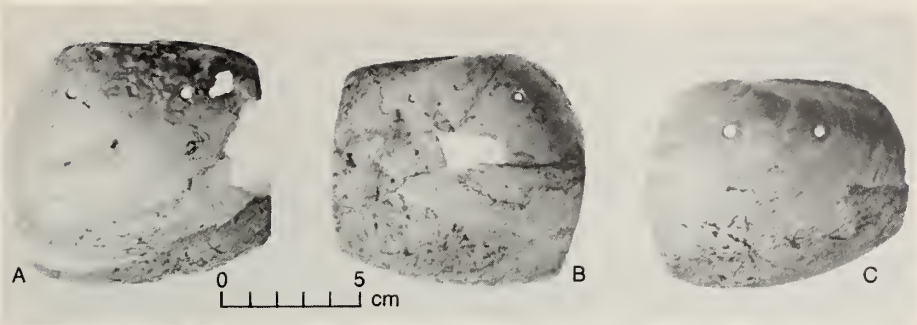

Plate 64 Shell gorgets, Hungry Hall, Mound 1. A, no. 46; B, no. 41; C, no. 39.

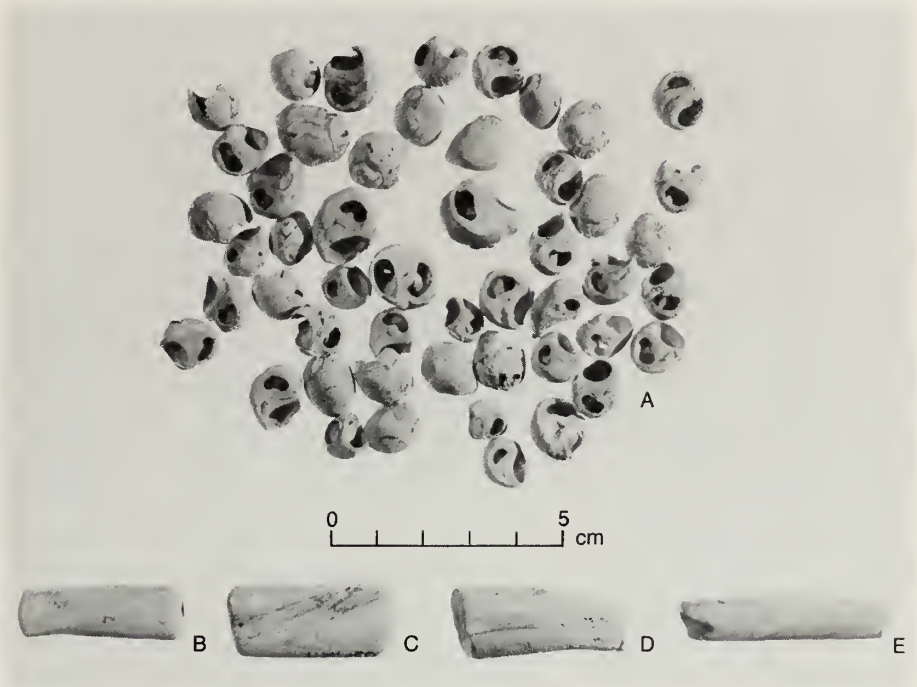

Plate 65 *Natica* shell beads, Hungry Hall, Mound 1. A, no. 38; B, no. 42; C, no. 50; D, no. 51; E, no. 49.

Plate 66 Antler picks
A, B, Hungry Hall, Mound 1, nos. 69, 88
C, Hungry Hall, Mound 2, no. 134

Plate 67 Arrow point embedded in first lumbar vertebra, no. 65, Hungry Hall, Mound 1

Plate 68 Internal structure of Hungry Hall, Mound 2

Plate 69 Excavating submound pit, Hungry Hall, Mound 2

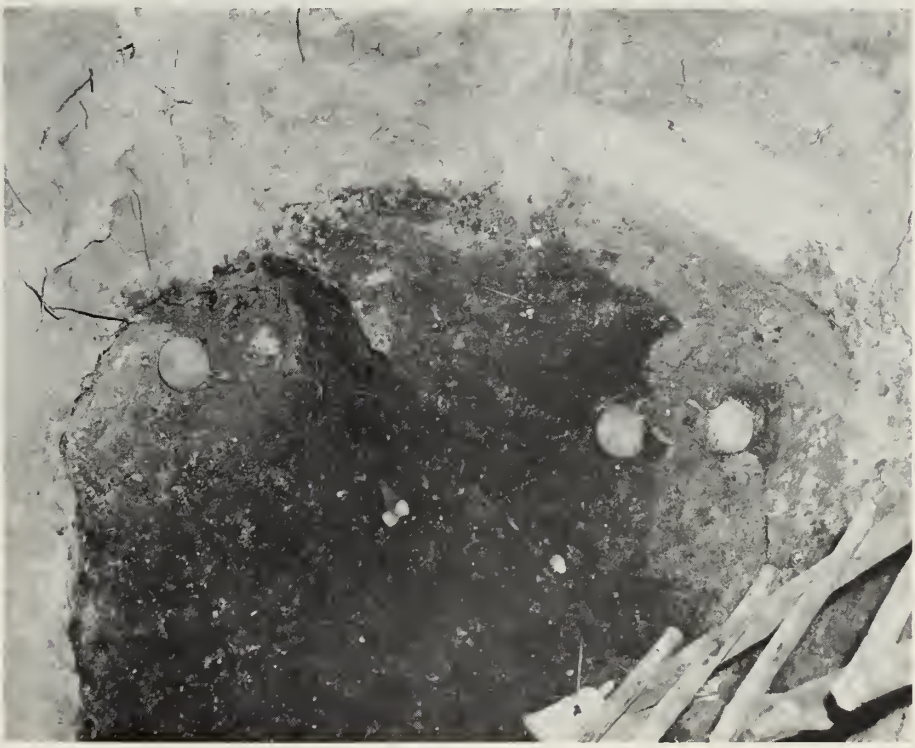

Plate 70 North (left) and south (right) clusters of skulls in submound pit, Hungry Hall, Mound 2

Plate 71 Masked skull, no. 98, *in situ*, Hungry Hall, Mound 2, north cluster

Plate 72 Hole in the back of a masked skull, no. 98, Hungry Hall, Mound 2

Plate 73 Base of north cluster, Hungry Hall, Mound 2

Plate 74 Masked skull, no. 96, Hungry Hall, Mound 2

Plate 75 Masked skull, no. 96, Hungry Hall, Mound 2

Plate 76 Evidence of scalping, no. 961.236.144, Hungry Hall, Mound 2

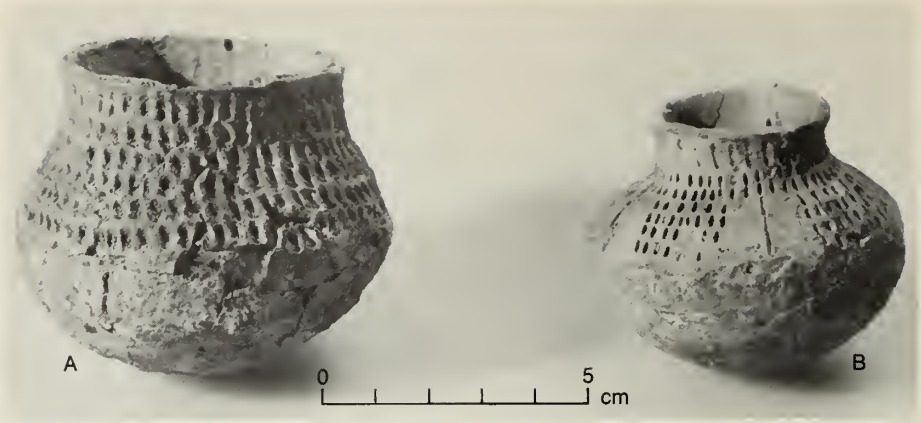

Plate 77 Clay pots, Hungry Hall, Mound 2. A, no. 961.236.102; B, no. 961.236.101.

Plate 78 From Hungry Hall, Mound 2
A, *Mitrea* shell beads, nos. 961.236.116–119
B, bone awl, no. 961.236.103
C, bird-bone beads, nos. 961.236.105, 111, 113, 115, 123–125

Plate 79 Armstrong Mound, Rainy River

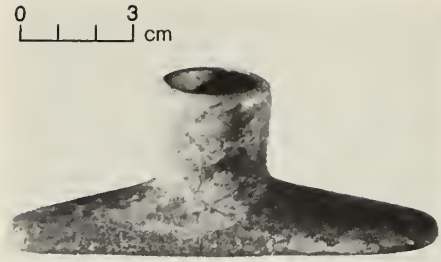

Plate 80 Monitor pipe, no. 470, Armstrong Mound, Rainy River

Plate 81 Stone sucking tube, no. 199, Armstrong Mound, Rainy River

Plate 82 Southeast quadrant of Oak Point Island Mound, Rainy Lake

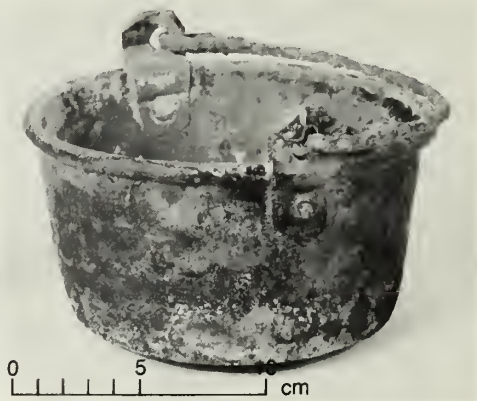

Plate 83 Copper kettle, no. 21, Oak Point Island Mound, Rainy Lake

Plate 84 From Oak Point Island Mound, Rainy Lake .
A, copper bracelet, no. 37
B, iron hide scraper, no. 24
C, copper ramrod guide, no. 68
D, chalcedony blade, no. 8
E, steatite sucking tube, no. 10
F, iron strike-a-lite, no. 29
G, native copper awl, no. 43
H, tip of a triangular file, no. 25

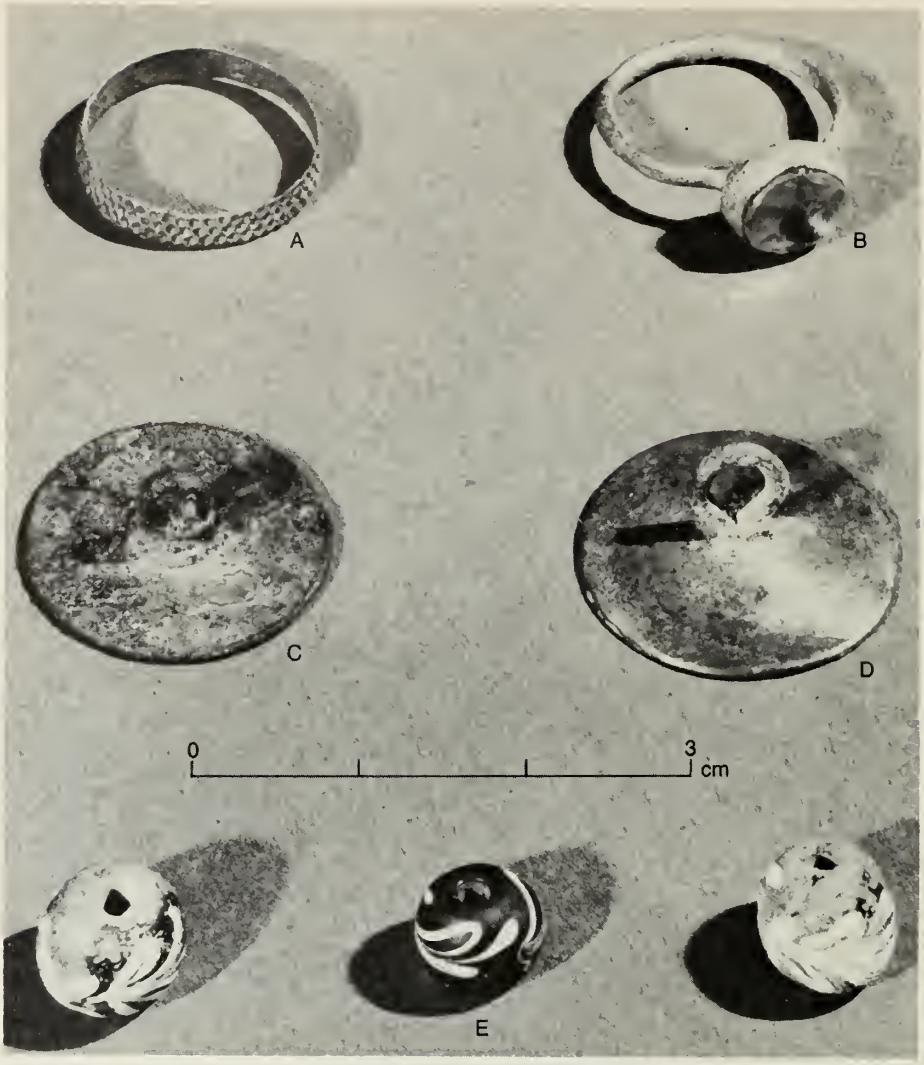

Plate 85 From Oak Point Island Mound, Rainy Lake
A, B, copper rings, nos. 35, 36
C, D, latten buttons, nos. 31, 32
E, glass beads, no. 69

Plate 86 Copper kettle, no. 23, Oak Point Island Mound, Rainy Lake

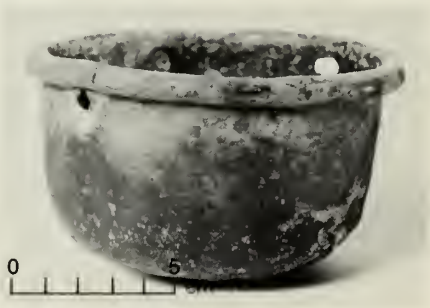

Plate 87 Copper kettle, no. 22, Oak Point Island Mound, Rainy Lake

Plate 88 Copper kettle, no. 16, Oak Point Island Mound, Rainy Lake

Plate 89 Copper kettle, no. 16, Oak Point Island Mound, Rainy Lake

Plate 90 Lid of copper kettle, no. 16, Oak Point Island Mound, Rainy Lake

Plate 91 Copper kettle, no. 16, *in situ*, Oak Point Island Mound, Rainy Lake

Plate 92 Wooden spoon, no. 19, Oak Point Island Mound, Rainy Lake

Plate 93 Wooden spoon, no. 20, Oak Point Island Mound, Rainy Lake

Plate 94 Piece of meat, no. 17, preserved inside kettle no. 16, Oak Point Island Mound, Rainy Lake

Plate 95 From Oak Point Island Mound, Rainy Lake. A, iron hoe, no. 26; B, iron axe, no. 27.

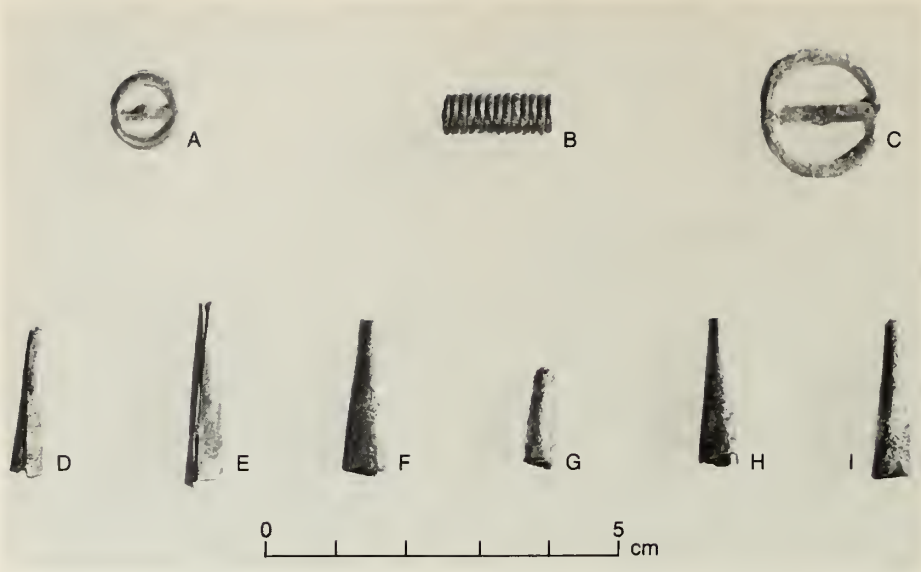

Plate 96 From Oak Point Island Mound, Rainy Lake
A, pewter ornament, no. 34
B, spiral copper bead, no. 72
C, pewter ornament, no. 33
D, E, F, G, H, I, copper bangles, nos. 50, 54, 52, 56, 49, 71

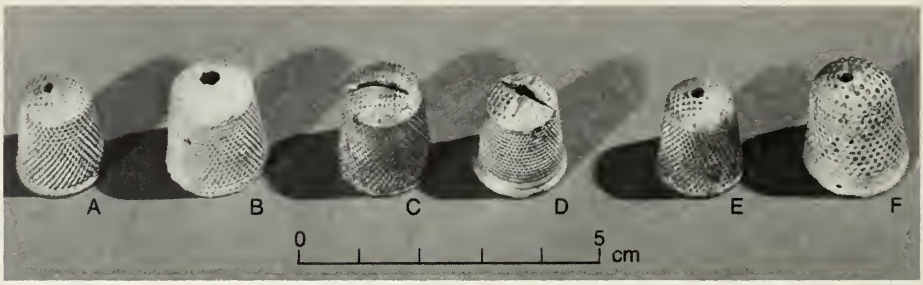

Plate 97 Brass thimbles, Oak Point Island Mound, Rainy Lake. A, no. 39; B, no. 38; C, no. 41; D, no. 40; E, no. 42; F, no. 66.

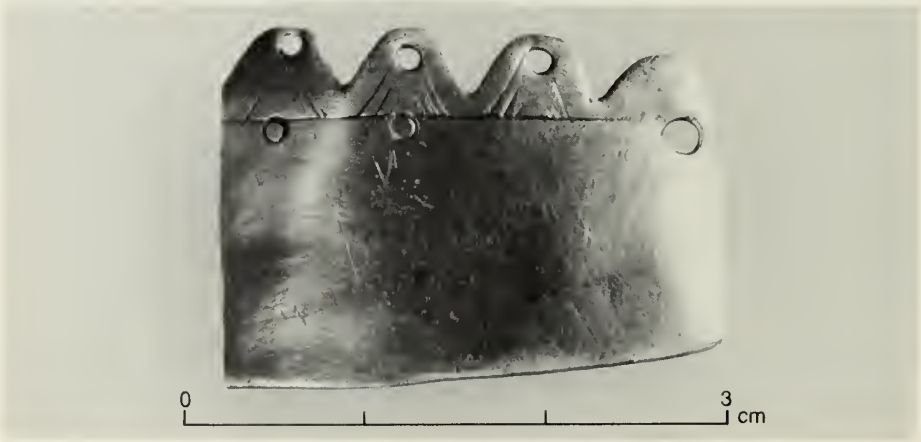

Plate 98 Silver jewellery fragment, no. 15, Oak Point Island Mound, Rainy Lake

Plate 99 Clay pot, no. 1, Oak Point Island Mound, Rainy Lake

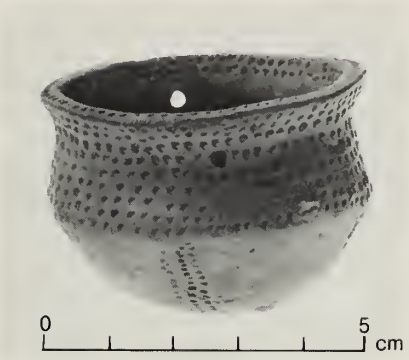

Plate 100 Clay pot, no. 2, Oak Point Island Mound, Rainy Lake

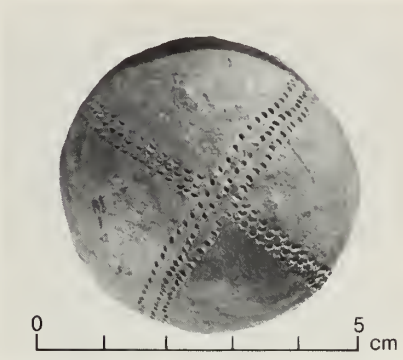

Plate 101 Bottom of clay pot, no. 2, Oak Point Island Mound, Rainy Lake

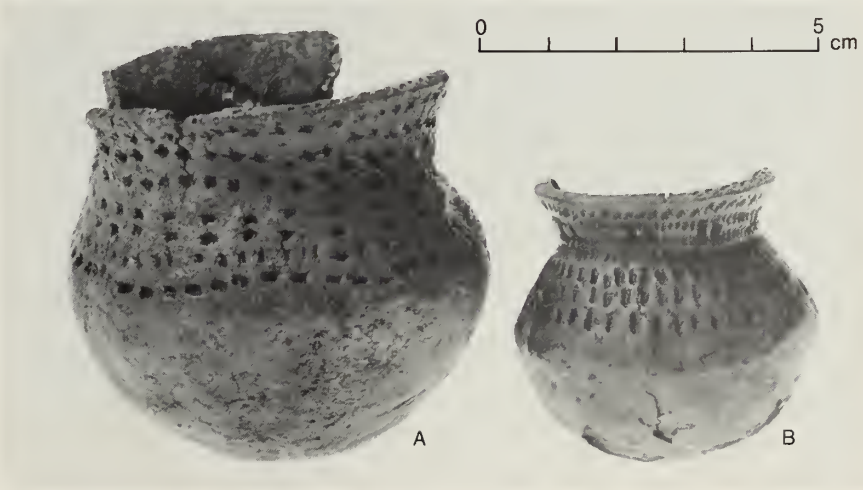

Plate 102 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 3; B, no. 4.

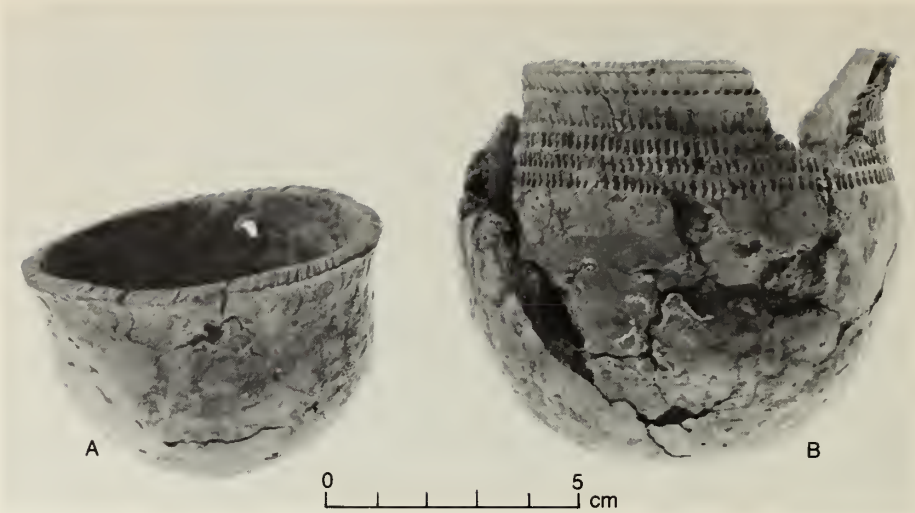

Plate 103 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 5; B, no. 16.

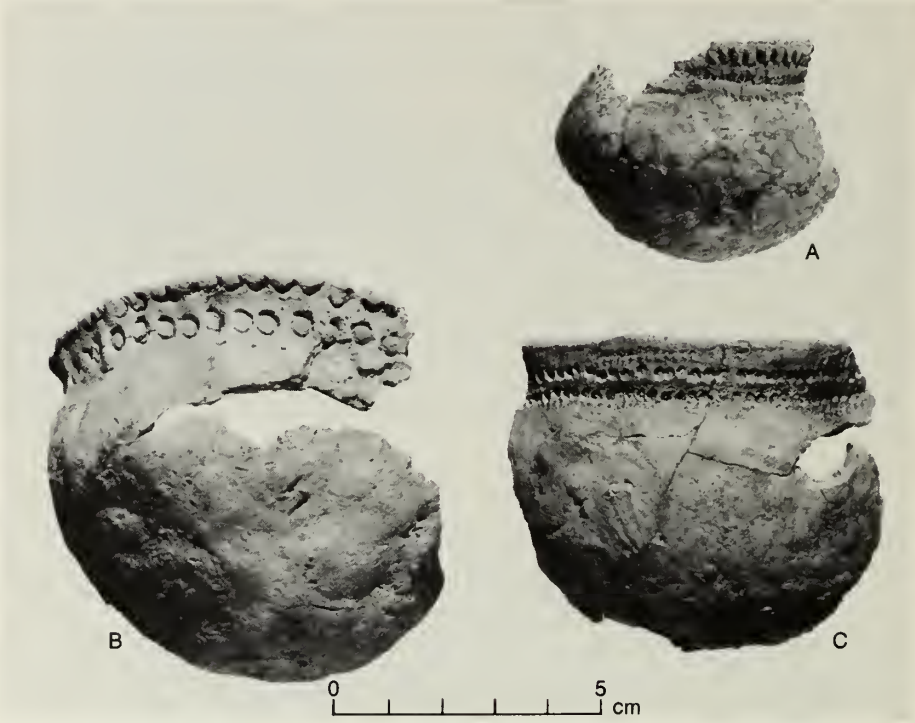

Plate 104 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 8; B, no. 7; C, no. 6.

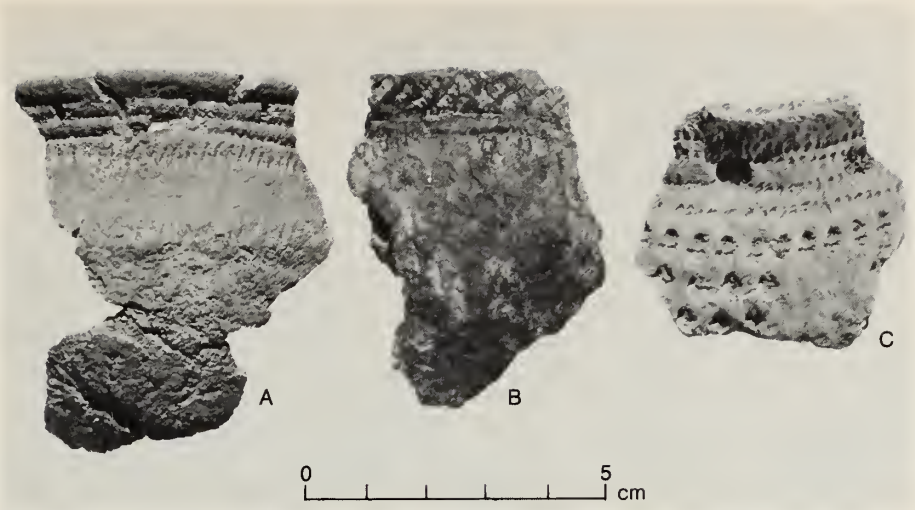

Plate 105 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 9; B, no. 13; C, no. 15.

Plate 106 Clay pots, Oak Point Island Mound, Rainy Lake. A, no. 11; B, no. 10; C, no. 14; D, no. 12.

Plate 107 Round, white glass beads, no. 94, Oak Point Island Mound, Rainy Lake

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